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ABSTRACT

This manual is designed as a compendium from which instructors can select materials and instructional aids for use in hunter education and shooting sports programs. Presented in the manual are 43 lessons and 34 laboratory activities that have been organized into units on the following topics: shooting sports responsibility, the learning process and teaching methods, firearms facts, ammunition and reloading, rifles and air guns, handguns, shotguns, shooting sports programs, field safety, hunting and wildlife conservation, hunting ethics, and advanced hunting programs. Each unit contains some or all of the following: a cover page that outlines the unit's purpose, objectives, content, evaluation methods, and references; a lesson guide that includes a content outline, introduction, teaching tips, summary, list of recommended teaching aids and methods, and recommended instructor and student references; and laboratory activity sheets that include a description of the activity, time limit, list of required facilities/equipment, and teaching tips. Appendixes contain the following: information on the learning process, teaching methods and techniques, lesson planning, visual aids, and some aspects of European hunting and game management; shooting positions checklists; and overhead transparencies. (MN)

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ADVANCED HUNTER EDUCATION

and Shooting Sports Responsibility

Bulletin 555A

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ADVANCED HUNTER EDUCATION

and

Shooting Sports Responsibility

Bulletin 555A

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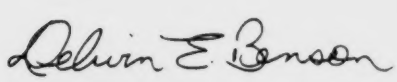
preface

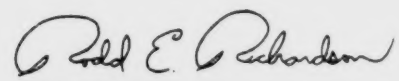
Shooting sports training opportunities are quite variable throughout North America. Many schools, colleges and universities are teaching about outdoor skills, hunter education, basic marksmanship and competitive shooting. Federal, state and provincial fish and wildlife management agencies conduct hunter training programs and hunter seminars. Clubs and organizations sponsor and conduct shooting and hunting activities. Many excellent publications and visual aids are available that help instructors to relate shooting and hunting content to students. This manual organizes content and instructional aids into an easy to use compendium. We considered how students learn and how teachers can facilitate learning in addition to reviewing the important areas of knowledge, skill development and ethical conduct necessary to enhance the behavior of students. We will consider our efforts successful if instructors find one lesson or activity useful for improving their program. Many instructors, however, will have the opportunity to use several parts or all of the manual.

No subject can ever be fully explored in a single manual or lesson plan. There is never a "best" way to learn or teach. The manual may meet some instructor's objectives exactly, but other instructors will need to modify it by adding to or subtracting from the contents. Again, we will be successful if this *Advanced Hunter Education* and *Shooting Sports Responsibility* manual provides impetus for your needs.

Because you have this manual, you want to teach. Shooters and hunters want and need to learn. It is now our responsibility to provide proper learning through thoughtful, planned, organized and well-delivered programs that enhance knowledge, skills, ethics and ultimately the behavior of shooters and hunters.



Delwin E. Benson



Rodd E. Richardson

foreword

The late Aldo Leopold, father of wildlife management in North America, was also a philosopher. His wisdom has helped many a forward thinker and perhaps a few foreword writers.

What he said decades ago could be written today. For example:

> *"An innumerable host of actions and attitudes, comprising perhaps the bulk of all land relations, is determined by the land-user's tastes and predilections, rather than by his purse. The bulk of all land relations hinges on investments of time, forethought, skill, and faith rather than on investments of cash. As a land-user thinketh, so is he."*

Leopold wrote those words to urge us forward toward creation of a positive land ethic. He said that recreation is not the outdoors, but our reaction to it.

Sportsmen during Leopold's time and since have received criticism about hunting and more personally, about hunters themselves. Criticism is leveled at the "reaction" of hunters to the outdoors. Whether the criticism is correct, based upon misconceptions, or both, it is not enough for sportsmen to argue that because they contribute dollars, therefore they are doing their part toward a land ethic. Sportsmen have paid well through the purse. Organizations and agencies like ours appreciate what we have received.

Now, more than ever before, sportsmen can rise to the challenge of positive actions and "reactions" in the outdoors. Sportsmen can dedicate a bit of time toward self improvement in addition to their dedication toward resource improvement. We suggest you take the opportunity within the fraternity of sportsmen to advance hunter education. Leopold also said that *"the tourist who buys access to his scenery misses it altogether; so also the sportsman who hires the state, or some underling to be his gamekeeper."* Likewise, we cannot expect the government to make the public's concern about hunters go away by making laws that direct us toward better knowledge, skills, ethics and behaviors. That job rests with us all and we hope this manual will contribute toward our part.

Use this manual in universities, schools, clubs, as part of basic hunter education or for innovative advanced programs. Have as your goal to encourage dedicated shooters and hunters with improved knowledge, skills, ethics and behavior. The achievement of these goals - and insuring the future of sportsmen - is up to all of us.

Delwin E. Benson
Cooperative Extension Wildlife Specialist and Professor
Colorado State University

acknowledgements

Motivation to produce the manual was provided by researchers and writers in North America who examined attitudes about hunters and hunting. Published information from hunter and shooter education authorities provided the base for developing a compendium of education materials. National Shooting Sports Foundation and their contributors provided encouragement and funding necessary to develop a class and to hire a graduate teaching assistant. Colorado State University and the College of Forestry and Natural Resources adopted the course "Teaching Shooting Responsibility" which allowed us to pilot the content, teaching materials and educational strategies that were eventually incorporated into the manual.

Special gratitude is extended to faculty in the Departments of Fishery and Wildlife Biology, Education, Physical Education and Military Science. They contributed thoughts, guest lectures and moral support. Dr. Howard Bruner and Mr. Eugene Decker, graduate committee members, gave guidance for educational standards of the manual and provided academic advising for the graduate program.

Students, too numerous to mention, were eager "subjects" that spent long hours learning about advanced hunter education and shooting sports. Their enthusiasm and work in and out of class provided us with the motivation to not give up.

The Authors
Delwin E. Benson
Rodd E. Richardson

ADVANCED HUNTER EDUCATION and Shooting Sports Responsibility

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introduction

This manual is designed to help instructors teach about shooting sports and hunter education. Concerned instructors must make careful preparations for their courses to insure that students acquire proper knowledge, skills, ethics and behavior about these lifetime activities. *Advanced Hunter Education* and *Shooting Sports Responsibility* provides a planning framework and essential teaching resources needed to conduct a wide variety of training programs. It is meant to simplify the instructor's job of providing quality shooting sports education.

There is no "best" way to train shooters and hunters. Instructors are encouraged to adapt manual contents to meet student needs and requirements of their programs. Material presented in the manual was fully "tested" in instructor training courses at Colorado State University. The manual should serve as a practical guide for teaching.

using the manual

Manual Design

Twelve units, 31 detailed lessons, 12 advanced lessons, 34 laboratory/activities and supporting material appear in the manual. This allows instructors to select from over 150 hours of training for hunter education and shooting sports. Each unit is organized in a standard format to aid instructors in locating and using information. A "normal" unit will have the following sections:

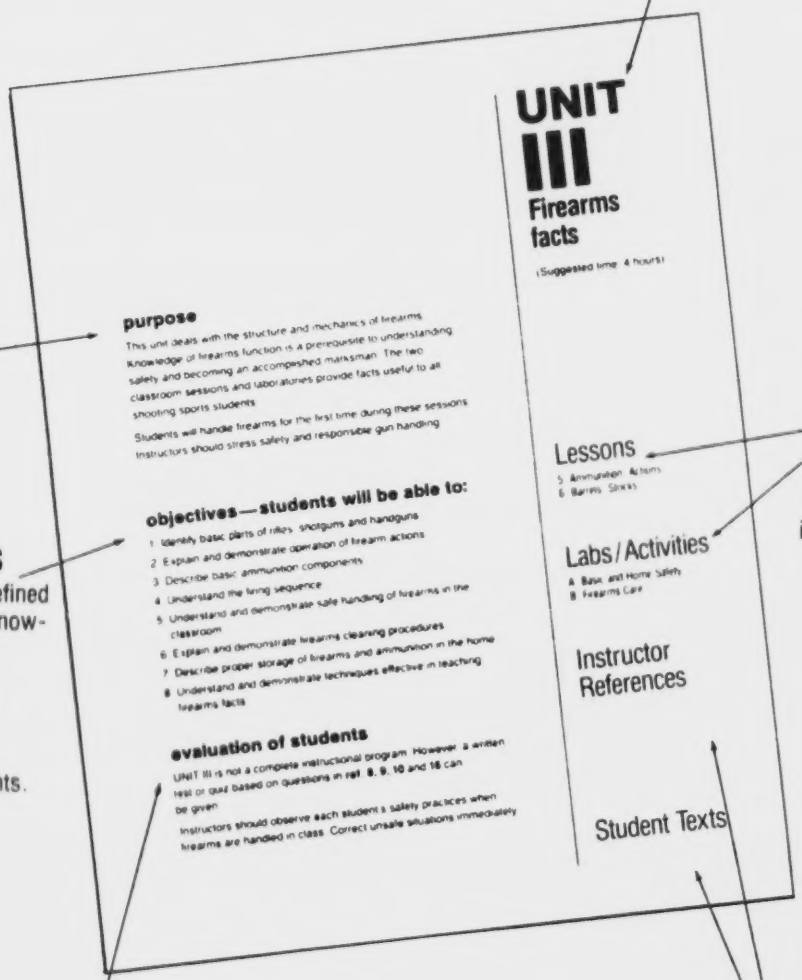
Unit (cover page)	-Figure 1	-Page 2
Lessons	-Figure 2	-Page 3
Laboratory/activities	-Figure 3	-Page 4

Example formats for the first three unit components are provided in Figures 1 through 3.

References for shooting sports have undergone rapid change in North America. New materials are constantly evolving. For latest updates about written, visual and audio aids, consult the National Rifle Association, organizations for the various shooting sports, industry, manufacturers, and hunter education coordinators with state wildlife agencies.

FIGURE 1 - Units (cover pages)

UNIT NUMBER (Roman) and TITLE
Suggested time allocation to complete the unit.


UNIT
III
Firearms facts
(Suggested time 4 hours)
purpose
This unit deals with the structure and mechanics of firearms. Knowledge of firearms function is a prerequisite to understanding safety and becoming an accomplished marksman. The two classroom sessions and laboratories provide facts useful to all shooting sports students.
Students will handle firearms for the first time during these sessions. Instructors should stress safety and responsible gun handling.
objectives—students will be able to:
1 Identify basic parts of rifles, shotguns and handguns.
2 Explain and demonstrate operation of firearm actions.
3 Describe basic ammunition components.
4 Understand the firing sequence.
5 Understand and demonstrate safe handling of firearms in the classroom.
6 Explain and demonstrate firearms cleaning procedures.
7 Describe proper storage of firearms and ammunition in the home.
8 Understand and demonstrate techniques effective in teaching firearms facts.
evaluation of students
UNIT III is not a complete instructional program. However a written test or quiz based on questions in ref. 8, 9, 10 and 16 can be given.
Instructors should observe each student's safety practices when firearms are handled in class. Correct unsafe situations immediately.
Lessons
5 Ammunition Actions
6 Barrels, Stocks
Labs/Activities
A Basic and Home Safety
B Firearms Care
Instructor References
Student Texts

PURPOSE
Brief statements describing unit contents and basic purpose.

OBJECTIVES
Specific objectives defined in terms of student knowledge, skills, attitude development and behavior. Instructors who have other objectives may need to change unit contents.

CONTENT
Lesson plans and laboratory/activities for the unit are listed for the instructor's convenience.

EVALUATION OF STUDENTS
Suggestions for measuring student achievements such as tests, papers, oral reports and field exercises. It is very important to evaluate students based on established objectives such as those stated above.

REFERENCES
Space is provided for instructors to list and update references for instructors and students.

FIGURE 2 - Lessons

Forty-three lesson plans for 50-minute classes are included in the manual. Although these plans can be used "as is," instructors should modify lessons to fit their situations.

UNIT NUMBER (Roman), LESSON NUMBER (Arabic) and LESSON TITLE
Lessons are numbered for easy identification.

REFERENCES for instructors

REFERENCES for students

CONTENT OUTLINE
Subject-matter portion of lesson.

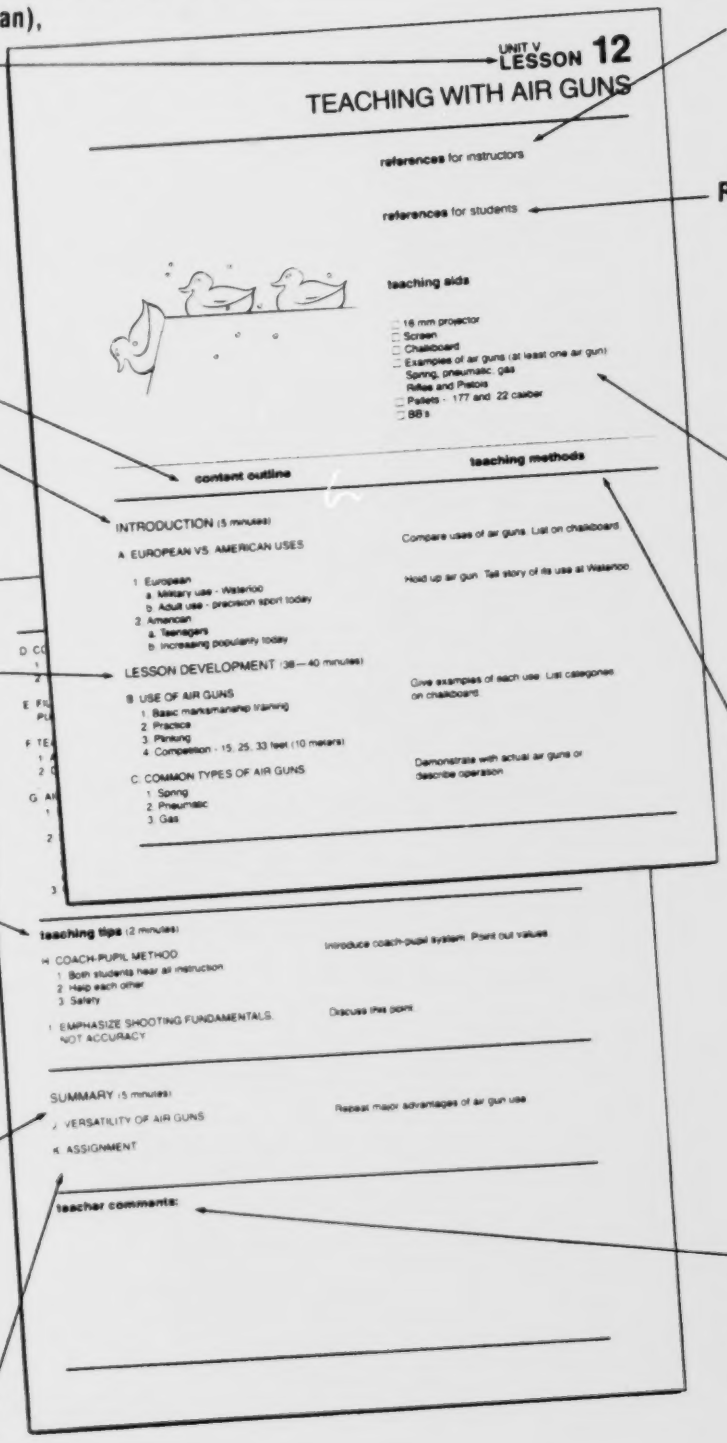
INTRODUCTION (time limit)
Outline of subject matter necessary for introducing students to the lesson.

LESSON DEVELOPMENT (time limit)
Outline of new subject material to be covered in the lesson.

TEACHING TIPS (time limit)
Helpful hints for instructors using the lesson and part of lesson content for instructor training courses. Teaching tips for a lesson are related to contents and/or teaching methods used in that lesson.

SUMMARY (time limit)
Outline of important concepts and/or facts presented in the lesson. introduction of new material to be covered.

Assignments to prepare students for new material or reinforce past lessons.


UNIT V
LESSON 12
TEACHING WITH AIR GUNS
references for instructors
references for students
teaching aids
16 mm projector
Screen
Chalkboard
Examples of air guns (at least one air gun)
Spring, pneumatic, gas
Rifles and Pistols
Pellets - .177 and .22 caliber
BB's
content outline
teaching methods
INTRODUCTION (5 minutes)
A. EUROPEAN VS. AMERICAN USES
Compare uses of air guns. List on chalkboard.
1. European
a. Military use - Waterloo
b. Adult use - precision sport today
2. American
a. Teenagers
b. Increasing popularity today
Hold up air gun. Tell story of its use at Waterloo
LESSON DEVELOPMENT (38—40 minutes)
B. USE OF AIR GUNS
1. Basic marksmanship training
2. Practice
3. Plinking
4. Competition - 15, 25, 33 feet (10 meters)
Give examples of each use. List categories on chalkboard.
C. COMMON TYPES OF AIR GUNS
1. Spring
2. Pneumatic
3. Gas
Demonstrate with actual air guns or describe operation
teaching tips (2 minutes)
H. COACH-PUPIL METHOD
1. Both students hear all instruction
2. Help each other
3. Safety
Introduce coach-pupil system. Point out values
I. EMPHASIZE SHOOTING FUNDAMENTALS, NOT ACCURACY
Discuss this point
SUMMARY (5 minutes)
J. VERSATILITY OF AIR GUNS
Repeat major advantages of air gun use
K. ASSIGNMENT
teacher comments:

TEACHING AIDS
All visual aids, audio-visual equipment and other items needed to present the lesson. Check this section during course planning to insure that teaching aids will be available.

TEACHING METHODS
How to teach subject matter. Methods to gain attention, involve and motivate students and maintain interest.

TEACHER COMMENTS
Instructors should make notes about the lesson. Identify teaching methods that worked well and describe any problems encountered. Suggest improvements for future presentations.

FIGURE 3 - Laboratory/Activities

Thirty-four laboratory activities are described in the manual. These exercises allow students to apply what they have learned during classroom sessions.

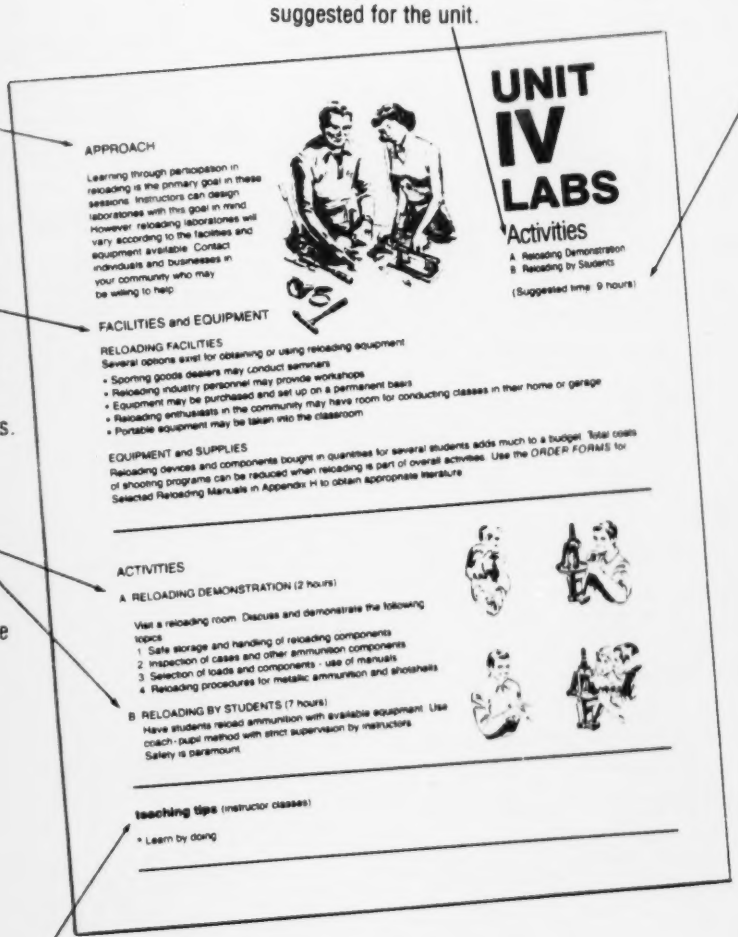
ACTIVITIES
Descriptive titles for all laboratory activities suggested for the unit.

LABORATORIES
Suggested time allocation.

APPROACH
Brief statements describing content and goals of laboratories.

FACILITIES and EQUIPMENT
Discussion of facilities and equipment necessary to perform suggested activities.

ACTIVITY TITLE (time limit)
Suggested activities are described in an outline. As with lessons, instructors are encouraged to modify laboratory activities to fit their situation and meet student needs.



UNIT
IV
LABS
Activities
A Reloading Demonstration
B Reloading by Students
(Suggested time 9 hours)

APPROACH

Learning through participation in reloading is the primary goal in these sessions. Instructors can design laboratories with this goal in mind. However reloading laboratories will vary according to the facilities and equipment available. Contact individuals and businesses in your community who may be willing to help.

FACILITIES and EQUIPMENT

RELOADING FACILITIES
Several options exist for obtaining or using reloading equipment
- Sporting goods dealers may conduct seminars
- Reloading industry personnel may provide workshops
- Equipment may be purchased and set up on a permanent basis
- Reloading enthusiasts in the community may have room for conducting classes in their home or garage
- Portable equipment may be taken into the classroom

EQUIPMENT and SUPPLIES
Reloading devices and components bought in quantities for several students adds much to a budget. Total costs of shooting programs can be reduced when reloading is part of overall activities. Use the *ORDER FORMS* for Selected Reloading Manuals in Appendix H to obtain appropriate literature.

ACTIVITIES

A RELOADING DEMONSTRATION (2 hours)

Visit a reloading room. Discuss and demonstrate the following topics:
1. Safe storage and handling of reloading components
2. Inspection of cases and other ammunition components
3. Selection of loads and components - use of manuals
4. Reloading procedures for metallic ammunition and shotshells

B RELOADING BY STUDENTS (7 hours)
Have students reload ammunition with available equipment. Use coach-pupil method with strict supervision by instructors. Safety is paramount.

teaching tips (instructor classes)
- Learn by doing

TEACHING TIPS (instructor classes)
Some laboratories include helpful hints for instructors using specific activities. These "tips" should also be discussed as a regular part of the exercise in instructor training programs.

instructional programs for hunters and shooters

Several training programs can be taught with the aid of this manual. Some instructors may use one unit or lesson while other instructors may use most of the publication. The order of units, lessons and laboratory/activities in the manual may not be arranged to fulfill the specific objectives of your program. In that case, change the order as necessary. Potential uses of the manual will be discussed below. Instructors can use these suggestions as guidelines when planning their own hunter education or shooting sports programs.

Self-teaching for Instructors

Teachers can brush up on principles of learning and teaching by studying UNIT II and APPENDICES A, B, C and D. The remainder of the manual has objectives, content outlines and teaching methods that can help instructors to learn about new subject areas or to review subjects with an emphasis on teaching.

Universities and Colleges - Shooting Sports and Hunter Education for Instructor Classes

Regularly Scheduled Courses - Colleges and universities have opportunities to teach long courses on an intensive and/or extensive basis. In such cases, most of the manual could be used. Some programs emphasize shooting, other programs are more hunter-related, while others include a combination of various shooting and outdoor activities.

Lesson plans in UNIT I through UNIT XI could be taught in approximately 50 minute classes. However, needs often dictate longer or shorter treatment of the material. UNIT XII "Advanced Hunting Programs" deviates from that plan. Lessons within that unit contain content outlines only; thus some instructors may merely introduce a subject while others will give detailed coverage of each item in the outline. In the latter case, a day, a week or a lifetime could be devoted to a given subject. The manual was developed and tested as part of the "Teaching Shooting Responsibility" instructor training course at Colorado State University. Approximately 80 hours of training were given in basic firearm use, hunting, wildlife management, ethics and teaching. The entire manual was modified to meet objectives and time limitations.

Classes for training instructors must include information on "how to teach" in addition to "what to teach." LESSONS 1 through 31 contain special "Teaching Tips" sections. Some laboratory activities are also developed for "instructor classes only."

Short Courses or Workshops - Complete shooting sports instructor programs can be offered as short courses or workshops during summer camps, summer sessions or interim periods. For example, Colorado State University completed 60 and 80 hour instructor training courses each in two-week blocks during "interim sessions" between semesters. Procedures for using the manual are similar to those for regularly scheduled courses except that guest instructors are extremely important not only to diversify expertise, but to provide a change of pace when teacher and student contact is so frequent.

Units and lessons could be taught separately or in combination for special interest

programs. Instructors should analyze their audiences to determine previous knowledge, teach needed basics leading up to the special program, then use the lessons or units desired. Examples of special program topics include, but are not limited to, "Learning and Teaching," "Shotguns," "Hunting Ethics," "Wildlife Management," "Hunting," etc.

Shooter and Hunter Education in Schools

Regularly Scheduled Courses - Shooting and hunting programs can be offered in elementary, junior or senior high schools as well as universities and colleges. The following units are suggested for a general shooting sports course. Modification of manual format will be necessary based upon age, size, knowledge and skills of students.

Units

I - Introduction to shooting sports responsibility
III - Firearms facts
IV - Ammunition and reloading
V - Rifles and air guns
VI - Handguns
VII - Shotguns
IX - Field safety
X - Hunting and wildlife conservation
XI - Hunting ethics

Approximately 68 hours are needed to complete the activities described above and to evaluate students. **Teaching tips** found in lessons and laboratories would not normally be discussed in class. Laboratory activities for "instructor classes only" can be omitted. Advanced lessons in UNIT XII are available to instructors wishing to expand or supplement this basic program.

Schools may also wish to train intensively for competitive shooting with rifles, handguns, shotguns or archery. In that case, the basics of firearms, ammunition, equipment and safety (UNITS I, III and IV) should be taught, followed by training about particular firearm shooting and practice on the range. A quick glance at the **table of contents** will enable instructors to choose appropriate units, lessons and laboratory/activities.

Short Courses or Workshops - Shooting sports training can be effectively used in a workshop format. Many junior and senior high schools now offer short courses or "study concentrations" for lifetime activities such as shooting sports. A general shooting sports curriculum can be useful in these situations.

Basic Hunter Education Program

Instructor Training - Courses for new hunter education instructors and refresher classes for veteran instructors can be taught with the aid of the manual. UNIT II, Learning and Teaching, may give instructors insight into teaching and learning or help them to recall and practice some of the essential principles of good communication. Each unit may help to fill gaps for instructors whose training needs will vary greatly.

The manual could be used in its entirety for references and teaching suggestions or as a self-teaching text. The following units will be of special interest as supplements to instructors that are participating in hunter education programs sponsored by state and provincial wildlife management agencies.

Units

II - Learning and teaching

VIII - Shooting programs

X - Hunting and wildlife conservation

XI - Hunting ethics

XII - Advanced hunting programs

Hunter Education Courses for Youth and First Time Hunters - In many states it is required that some hunters pass a hunter education course before being eligible to obtain a hunting license. Other states have similar programs on a voluntary basis. Hunter Education Coordinators with fish and wildlife management agencies administer these programs.

You must be certified by them to teach their course. This manual will aid with organization, learning and teaching strategies and lesson content.

Some instructors may wish to expand course content and intensity. The following units should be helpful:

Units	*Contents to use*
I -Introduction to shooting sports responsibility	All
III -Firearms facts	All
IV -Ammunition and reloading	Modify to a 1 hour class at minimum.
V -Rifles and air guns	Specific needs will vary.
VI -Handguns	Minimum of 6 hours with at least 2 hours of shooting.
VII -Shotguns	
IX -Field safety	All
X -Hunting and wildlife conservation	All
XI -Hunting ethics	All

Approximately 30 hours of classroom and field training are suggested in the preceding units. Students develop basic shooting skills and learn about important topics such as wildlife management, wildlife identification, game care and hunting ethics. The suggested course is longer than many current hunter education training programs. To help novices become successful hunters and true sportsmen, more training and a greater commitment should be encouraged.

Advanced Hunter Training

Education for Adults - There is a growing need and demand for all hunters to make a strong commitment toward their sport. Persons with basic knowledge want and deserve more. Opportunities are available for advanced training in first aid, swimming, fly tying, fishing, backpacking, camping, orienteering, shooting, etc. Sports enthusiasts can take lessons for tennis, golf, handball and can participate in organized activities

like softball, baseball, bowling and even shooting where coaching is available or leagues strive to improve standings and individual performance. Only a few states and provinces, however, offer advanced training for hunters. Even then, programs are short-term, lack follow-up and have no common goals or standards of comparison. In golf and shooting we strive for skill improvement, but hunting requires more than skill with firearms. Good sportsmen must be knowledgeable, skillful, ethical and must demonstrate proper behavior. Their lessons and classrooms include the environment, animals, landowners, managers, other hunters, non-hunters and of course the lore, culture and experiences necessary to be a good hunter.

This manual covers topics ranging from basic shooting of all hunting firearms through wildlife management, ethics and advanced lessons about hunting specific kinds of game. A quick look at the **table of contents** will help readers to see that a great depth and breadth of advanced training topics could be used.

Long-Term Advanced Training - Sporting, shooting and conservation clubs are always in need of topics and speakers for meetings. A logical and easy way to provide programs is through a systematic set of topics that apply to adult hunters. Objectives, programs and speakers could be set well in advance. Club meetings would be interesting, valuable and working toward a goal of better knowledge, skills, ethics and behavior within the hunting fraternity.

Appendices A, B, C, D and F of the manual should be read thoroughly and followed closely to insure that course organization and delivery follow proper principles of learning and teaching. The following list is a quick review of suggestions that should be considered:

1. Establish goals for time spent and content covered. Determine how time and information should best be presented to meet the needs of your clients. For example, some programs may be intensively conducted through eight hour classes each day during one or two weeks. Persons in other programs may utilize monthly seminars over a two-year period. In either case, content could be the same, yet time would be arranged differently.
2. Determine and confirm proper educators for the program. Selection of speakers may be quite variable depending upon needs, time frame and desires of clients. Your most important consideration is to find speakers that can adequately relate desired content to the audience in a manner that will be accepted. The best hunter, shooter or biologist may be the worst teacher. A good teacher for one group may be poor for another. Select persons for their knowledge *and* teaching ability. Either trait considered alone is inadequate.
3. Determine and confirm use of proper facilities, equipment and teaching materials. You may need classrooms, field trip sites, shooting areas, references or films. Know what is needed and obtain everything well in advance.
4. Conduct classes in a professional manner.
5. Conduct programs that improve knowledge, skills, ethics and behavior for members of your community. Keep accurate records of topics, participants and achievements of individuals.

Short-Term Programs and Workshops - Lengthy training programs may not meet your clients' needs at this time. Shorter and very beneficial training can still be conducted. Anything that improves knowledge, skills, ethics and behavior of sportsmen will improve their enjoyment of hunting. Sportsmen may want a review of waterfowl hunting before the season. A seminar could be provided about regulations; biology; use of dogs, calls and decoys; building blinds; shotgun shooting; water survival. Instructors could select material from the following units:

Units

VII - Shotguns
IX - Field safety
X - Hunting and wildlife conservation
XI - Hunting ethics
XII - Advanced hunting programs

Similar sessions could be held for big game, upland game, field care and handling of game, wildlife management, hunter ethics or any topic of interest to the club or community.

Rifle, Handgun or Shotgun Training Courses

Instructor Training - This training will be useful for persons teaching about firearms, safety and marksmanship for various shooting-oriented programs. Basic firearms training courses for instructors would include the following manual contents:

Units	*Contents to use*
I - Introduction to shooting sports responsibility	All
II - Learning and teaching	All
III - Firearms facts	All
IV - Ammunition and reloading	Optional unit
V - Rifles and air guns	Select rifle, handgun or shotgun unit. Use complete unit.
VI - Handguns	
VII - Shotguns	
VIII - Shooting programs	All
X - Hunting and wildlife conservation	Appropriate lessons optional

Exact length of courses will depend upon the instructor's objectives and choice of manual contents. As a rule-of-thumb, approximately 25 to 35 hours are needed to train and evaluate potential instructors.

The instructor training courses described above will not produce highly skilled marksmen. Extra shooting practice is necessary if potential instructors wish to become proficient with each type of firearm.

Student Training - Student programs for rifle, handgun or shotgun training will take about 18 to 25 hours for classroom and field exercises. Many hours of additional practice are needed to develop shooting skills. Students can practice on their own or during scheduled times after understanding basic concepts. Basic course material can be found in the following sections of the manual:

Units	*Contents to use*
Introductory class prepared by instructor	
III - Firearms facts	All
IV - Ammunition and reloading	Optional unit
V - Rifles and air guns	Select rifle, handgun, or shotgun unit. Use complete unit as applicable.
VI - Handguns	
VII - Shotguns	
X - Hunting and wildlife conservation	Appropriate lessons optional

Instructors will not normally discuss **teaching tips** found in some lessons and laboratories. In addition, laboratory exercises for "instructor classes only" can be omitted.

Recreation Programs

Agencies or groups responsible for recreational development can offer several types of shooting programs by using the manual. The programs for hunter education and for rifle, handgun and/or shotgun training previously discussed could be used in short-term programs to meet the needs of people with diverse interests. More general and long-range shooting sports courses similar to those described in the section titled *Shooter and Hunter Education in Schools* are available as year-round recreation activities. These activities, whether short or long-term, can add new dimensions to any recreational program.

Don't overlook the possibility of using the manual to train recreation staff as instructors for these activities. If a recreation department does not have qualified shooting sports instructors on the present staff, contact instructors from the community or from government agencies to help with initial training for recreation personnel. Hunter education coordinators with wildlife agencies and the staff with National Rifle Association are good "first contacts."

program development

Program Planning

Initial planning for hunter or shooter training programs will probably be the most time consuming part of the program development process. These preparations can be completed in three phases with the aid of this manual. Each step is briefly described below.

1. A thorough knowledge of the sections titled *USING THE MANUAL* and *INSTRUCTIONAL PROGRAMS FOR HUNTERS AND SHOOTERS* is a starting point for developing training programs. Understanding how to use contents of the manual will simplify the instructor's task in other phases of program development.
2. Make a syllabus for the course using lessons, laboratory/activities and advanced lessons provided in the manual and other materials. Specific needs for the program and estimated costs can be determined once the course outline is prepared.
3. Establish a support base for the tentative program. Discuss the proposal with individuals and groups who may be interested in backing efforts to establish a hunter or shooter training course. Administrators, community leaders, organized groups and potential students are just a few of the possible supporters.

Program Proposal

The following questions can be expected when approaching decision-makers with a program proposal:

1. Is there a need for shooting sports training?
2. What are the program goals?
3. What short and long-term benefits will result from the program?
4. How will the program be carried out?
5. What are the estimated costs and possible funding sources?
6. Is there public support for the program?

UNIT I

Introduction to shooting sports responsibility

UNIT I

Introduction to shooting sports responsibility

(Suggested time: 1 hour)

purpose

UNIT I introduces the instructor training course and shooting sports. Instructors learn what students expect from the course; students get an overview of shooting sports activities and course content.

First contact between instructors and students is very important. Instructors should be enthusiastic and take every opportunity to motivate students.

objectives — students will be able to:

1. Identify educational and recreational values of shooting sports.
2. Understand that a variety of shooting sports exists.
3. Understand how the training course will benefit them.

evaluation of students

Students should identify values of shooting sports education and general categories of shooting sports on a short quiz or test questions during future sessions.

Lessons
1. Why Shooting Sports?

Instructor References

Student Texts

UNIT I
LESSON 1
WHY SHOOTING SPORTS?

references for instructors

references for students

teaching aids

- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ Chalkboard

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. WELCOME TO COURSE 1. Instructor(s) 2. Students - why taking course	Introduce instructor(s). Have each student introduce self. Ask students why they are taking course.
LESSON DEVELOPMENT (40 minutes)	
B. COURSE CONTENT 1. Need for course 2. Objectives 3. Student benefits	Hand out and discuss course syllabus, texts and assignments. Identify need, objectives, benefits.
C. FILM Show an introductory film about shooting sports.	Introduce film.

D. VALUES OF SHOOTING PROGRAMS

1. Participant activity
   a. Coeducational
   b. Few physical limits - progress at own rate
   c. Group or single
   d. Many ages
2. Safe
3. Inexpensive
4. Recreational - educational
   a. Self-discipline, ethics
   b. Teamwork
   c. Concentration
   d. Coordination, neuromuscular development
5. Lifetime sport

Summarize film or introduce shooting sports by asking students to identify values. List on chalkboard.

SUMMARY (5 minutes)

E. SHOOTING PROGRAMS ARE VALUABLE

1. Individual
2. School, community
3. State, nation, society

Give example of each level of value.

F. ASSIGNMENT

Remind students of appropriate references for next lesson

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teacher comments:

Introduction to shooting sports responsibility

References and notes

UNIT II

Learning and teaching

UNIT II

Learning and teaching

(Suggested time: 5 hours)

purpose

Successful teaching requires more than a thorough knowledge of subject matter. Knowledge is of little value to teachers who cannot communicate it to students. Therefore, information about learning and teaching principles is essential. Instructors must understand and apply learning and teaching principles to provide students with a productive educational experience. This unit supplies useful information for instructors and students who will eventually become instructors.

objectives — students will be able to:

1. Define learning and understand the teacher's role in the learning process.
2. Identify and discuss learning principles and motivational forces which facilitate learning.
3. Recognize the need to apply learning theory when planning lessons and selecting teaching methods.
4. Understand and appreciate the need to use a variety of teaching activities.
5. Describe some general teaching methods and how they might be used in classrooms.
6. Identify considerations which help to make lectures, questioning and direct experiences more effective.
7. Recognize the need to complete course, unit and daily lesson plans.
8. Describe basic components of a daily lesson plan.
9. Understand and discuss important considerations in physical preparation of the classroom.
10. Identify general types of visual aids and describe how they can be used.
11. Understand basic considerations in constructing visual aids.
12. Demonstrate how to set up and operate various projectors.
13. Apply their knowledge of learning theory, teaching methods, lesson planning, classroom preparation and visual aids by completing selected assignments.

Continued on next page

Lessons

2. The Learning Process
3. Teaching Methods
4. Lesson Planning

Labs / Activities

A. Classroom Preparation
B. Visual Aids

Instructor References

Appendices: **A, B, C, D, F**

Student Texts

Appendices: **A, B, C, D**

evaluation of students

Evaluating potential instructors is an important function in instructor training courses. Assignments related to this unit have a high priority and instructors should use as many activities as possible. These assignments do *NOT* appear in specific lesson plans. Select activities related to this unit NOW and incorporate them into your course outline.

The following assignments are suggested for evaluation in UNIT II. Many other useful activities can be developed.

1. Written tests - Give students a written test covering UNIT II. For those desiring instructor ratings, the NRA test and other requirements must be completed.
2. Critiques - Each student does a written critique of one presentation during the course. Critiques should identify and evaluate teaching methods used and suggest alternatives or improvements.
3. Lesson plans - Students prepare lesson plans for a one hour class on assigned subjects. Each student presents a short description of the lesson to classmates. Written plans and presentations are both graded.
4. Notebooks - Students are required to organize all texts, handouts and notes in a manner which will be helpful in their roles as shooting responsibility instructors. Notebooks are turned in and evaluated near the end of the course.
5. Visual aids - Each student prepares one visual aid suitable for use in a shooting responsibility course. Instructors approve ideas for visuals and evaluate final products. An additional project requires students to give brief presentations explaining how to use their visuals.
6. Classroom preparation - Students select one day when they help instructors set up the classroom.
7. Outside teaching assignment - Each student presents a complete lesson to an assigned group. For example, instructor courses at Colorado State University have taught riflery and hunter education classes to Boy Scouts. Instructors coordinate the course with input from students. Students are evaluated based on their performance in presenting the lesson and assisting on the range.

UNIT II
LESSON 2

THE LEARNING PROCESS

references for instructors

Appendices: **A, F**

references for students

A *The Learning Process* (xeroxed copies for students)

teaching aids

NOTE: Invite a professional educator to teach LESSON 2. Instructors can provide this lesson plan, overhead transparencies and Appendix A to help your guest prepare.

- ☐ Chalkboard
- ☐ Overhead projector
- ☐ Screen
- ☐ **ref. F** Prepare overhead transparencies
  1. Learning = Behavioral Change
  2. How Do We Learn?
  3. Purpose
  4. Individual Differences
  5. Active Process
  6. Practice Makes Perfect
  7. Level of Challenge
  8. Motivation

content outline	**teaching methods**
INTRODUCTION (5 minutes)	
A. IS FIRE HOT? **ref. A** 1. Learning occurs over time 2. We learn in different ways	Light matches or candle and ask several students to hold their fingers in flame. Ask students *why* they responded like they did and *how* responses were learned. Discuss process of learning about fire.
LESSON DEVELOPMENT (40 minutes)	
B. WHAT IS LEARNING? **ref. A** 1. Change in behavior 2. Identifying changes in behavior a. New knowledge b. New skills c. New attitudes	Refer back to fire examples and discuss. Give other examples. Transparency 1.

C. THE INSTRUCTOR'S JOB **ref. A**

1. Enhancing the learning process
   a. Lesson planning
   b. Teaching methods
   c. Instructional materials
2. Teachers control what is learned

Discuss. Ask students how they would facilitate learning.

D. HOW DO WE LEARN?

1. Taste
2. Touch
3. Smell
4. Hearing
5. Sight

Transparency 2. Discuss.

E. LEARNING PRINCIPLES **ref. A**

1. Using learning principles facilitates learning
2. Learning must have a *purpose* for the learner
   a. Students often have their own purpose
   b. Sometimes teacher must provide a reason to learn
3. *Individual differences*
   a. Cultural background
   b. Physical
   c. Emotional
   d. Intellectual
4. *Active process*
   a. Learn by doing
   b. Student involvement enhances learning
5. *Practice makes perfect*
   a. Keep it *simple* and *repeat* major points
   b. Apply new skills
6. *Level of challenge*
   a. Success is important
   b. Select appropriate level of difficulty

Discuss each principle. Give examples.

Transparency 3.

Transparency 4.

Transparency 5.

Transparency 6.

Transparency 7.

F. MOTIVATION **ref. A**

1. Strongest single force in the learning process
2. Teacher's role - motivating students
3. Motivational forces
   a. Enthusiasm
   b. Existing interests
   c. Psychological needs
   d. Self-imposed tasks
   e. Reward and reinforcement
   f. Varied teaching methods

Define and discuss. Use transparency 8 to introduce motivation.

List forces on chalkboard and discuss. Give examples.

G. APPLYING LEARNING PRINCIPLES **ref. A**

1. Lesson plans
2. Teaching methods
3. Instructional materials

Discuss how learning principles can be applied by instructors to improve learning.

SUMMARY (5 minutes)

H. EFFECTIVE TEACHING **ref. A**

1. Know what learning is all about
2. Apply learning principles
3. Motivate students
4 Enhance learning
   a. Lesson planning
   b. Teaching methods
   c. Instructional materials

Repeat major points.

Introduce LESSONS 3 and 4.

I. ASSIGNMENT **ref. A**

Hand out xeroxed copies of Appendix A.

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teacher comments:

UNIT II
LESSON 3
TEACHING METHODS

references for instructors

Appendices: **B**, **F**

references for students

B *Teaching Methods and Techniques* (xeroxed copies for students)

teaching aids

NOTE: As in LESSON 2, invite a professional educator to talk about teaching methods. Teachers who have the ability to demonstrate several teaching methods are an asset for this lesson. Provide a lesson plan, overhead transparencies and Appendix B to help your guest prepare.

- ☐ Chalkboard
- ☐ Overhead projector
- ☐ Screen
- ☐ **ref. F** Prepare overhead transparencies
  - 9. Retention
  - 10. Levels of Experience

content outline	**teaching methods**
INTRODUCTION (5 minutes)	
A. LEARNING THE HARD WAY **ref. B** 1. Some teaching methods don't work 2. Alternate methods are available a. No best method, but all methods need skillful guidance by teachers b. A diversity of methods is best	Begin class as if you're going to read the entire lecture. Talk in a monotone with your eyes glued to the reading material. Use the chalkboard incorrectly. Pause for a moment and ask students 1) if they have been in similar classes, 2) if they have learned anything, and 3) how it could be improved. Discuss alternatives.
LESSON DEVELOPMENT (40 minutes)	
B. TEACHING AND LEARNING ACTIVITIES **ref. B** 1. Retention of information	Discuss. Transparency 9. Give example of each activity on transparency.
2. Levels of experience in teaching methods a. Combine abstract and concrete experiences	Transparency 10.

b. Teaching objectives help determine best methods
c. Use diverse teaching methods

Give examples of teaching methods (see Appendix B). List methods on chalkboard and relate to levels of experience. Leave list on chalkboard.

C. LECTURES CAN BE FUN **ref. B**

Discuss.

1. Types of lectures
   a. Formal
   b. "Teacher talks"
2. If you're not skillful at lecturing, use other methods

Give examples of alternatives.

3. Effective lecturing

List considerations on chalkboard. Give examples and ask questions.

   a. Tailor lecture to your audience
   b. Keep lectures short
   c. Use simple language
   d. Present new material
   e. Plan what will be said
4. Boredom is the major problem - watch for signs of boredom

Refer to beginning of this class. Give examples of signs of boredom.

   a. Verbal clues
   b. Non-verbal clues

D. EFFECTIVE TEACHER BEHAVIORS **ref. B**

Demonstrate how each behavior might be used.

1. Establish interest at beginning of lecture
2. Emphasize with gestures
3. Maintain eye contact
4. Change facial expressions
5. Move around classroom
6. Vary voice level and talking speed
7. Always prepare ahead

E. QUESTIONING AND DISCUSSIONS **ref. B**

1. Questioning is an art
2. Types of questions

List types on chalkboard. Give examples of each type of question.

   a. Recall
   b. Convergent
   c. Divergent
   d. Value
3. Effective questioning

List considerations on chalkboard. Give examples.

   a. Plan key questions in advance
   b. Make questions clear and concise
   c. Be friendly and informal
   d. Involve all students
   e. Don't embarrass students
4. Positive reinforcement

Discuss importance.

   a. Call on students by name
   b. Use a variety of words (good, well done, etc.)

F. DIRECT EXPERIENCES **ref. B**

Give example such as classroom sessions on shooting followed by range exercises.

1. Learning by doing is best
2. Blend theory presented in classroom with "doing"

SUMMARY (5 minutes)

G. HOW WOULD YOU DO IT? **ref. B**

1. Teaching methods available
   a. Lecture
   b. Questioning
   c. Participation
   d. Others - as needed
2. Several teaching methods will work
3. Use diverse teaching methods

Propose a hypothetical teaching topic such as "safe gun handling." Ask students what teaching methods they would use and *why*. Refer back to teaching methods listed on chalkboard.

H. ASSIGNMENT **ref. B**

Hand out xeroxed copies of Appendix B.

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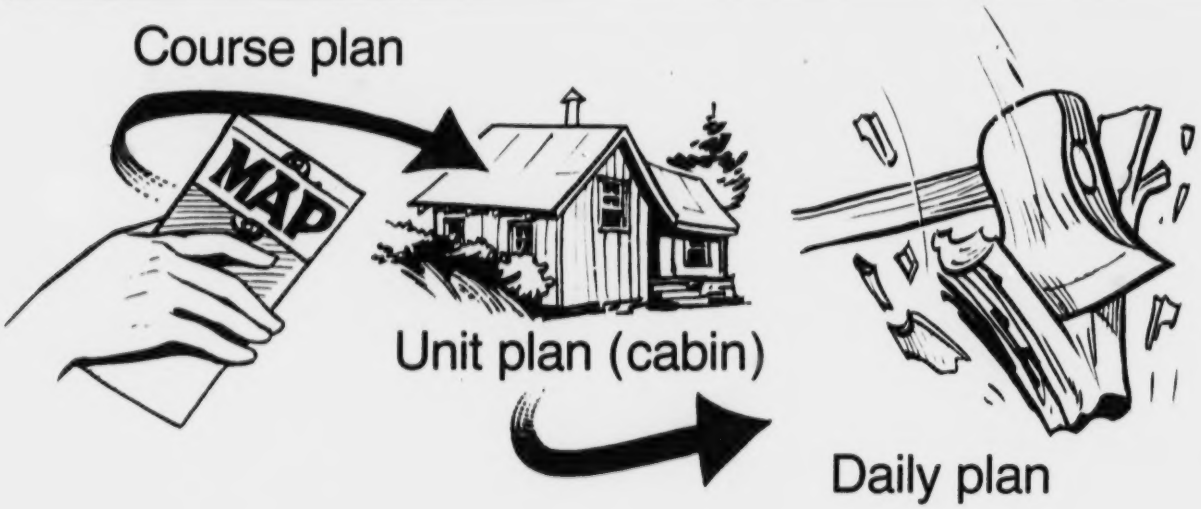
teacher comments:

LESSON PLANNING



references for instructors

Appendices: **A, B, C, F**

references for students

C *Lesson Planning* (xeroxed copies for students)

teaching aids

NOTE: As in LESSONS 2 and 3, invite a professional educator to talk about lesson planning. Provide a lesson plan, teaching aids and Appendix C to help your guest prepare.

- ☐ Chalkboard
- ☐ Overhead projector
- ☐ Screen
- ☐ **ref. F** Prepare overhead transparencies
  - 11. Planning Levels
  - 12. Daily Lesson Plan
- ☐ One firearm (any type)

content outline	**teaching methods**
INTRODUCTION (5 minutes)	
A. WHAT ARE YOUR PLANS? **ref. C** 1. Each individual has a plan for the future 2. Teachers must plan to enhance learning a. Learning does not happen by chance b. Objectives are defined and plans are made to reach those objectives 3. Plan for effective use of time and purposeful teaching	Initiate discussion on future plans of students in the class. Relate their need to plan for the future with the teacher's need to plan for learning.

LESSON DEVELOPMENT (35 minutes)

B. LEVELS OF PLANNING **ref. C**

1. Course plan
   a. Long-range
   b. Establish priorities
2. Unit plan
   a. Blocks within course plan
   b. Coordinates to achieve objectives
3. Daily lesson plan
   a. Short-range
   b. Specific

Use transparency 11 to explain. Advise students that course and unit plans are covered in reading assignment to be given at the end of the hour.

C. DAILY LESSON PLANS **ref. C**

1. Effective learning experiences are planned
2. Why daily lesson plans?
   a. Efficient use of time and materials
   b. Puts logical order to learning
   c. Insures availability and use of teaching aids
   d. Teacher remembers lesson content
   e. Basis for future improvements
3. Types of lesson plans
   a. Highly variable
   b. Use what works best for *you*

Discuss.

Ask students why planning is necessary. List reasons on chalkboard. Give examples of common mistakes in unplanned lessons.

D. EXAMPLE LESSON PLAN **ref. C**

1. Subject
2. Objectives
   a. Specific results desired in terms of accomplishment by students
   b. New knowledge, skills, attitudes, or behaviors
3. References
   a. Instructor references
   b. Student reading
4. Teaching aids (supplementary materials)
5. General lesson format
   a. Content on left side
   b. Teaching methods on right side
6. Lesson components
   a. Develop techniques to "grab" attention (set the stage) and retain attention throughout the lesson
   b. Introduction - focus attention and motivate students
   c. Lesson development - new subject matter
   d. Summary - major concepts covered
   e. Assignment - new material to be covered
7. Teacher comments - suggested improvements

Transparency 12. Identify and describe each component of the plan. Give examples.

Hold up firearm.

E. JUDGING A LESSON PLAN **ref. C**

Discuss.

1. Can you use it?
2. Could other teachers use it?
3. Can it be used to improve future lessons?

SUMMARY (10 minutes)

F. LESSON 4 AND UNIT SUMMARY
ref. A, B, C

List the *five W's* and *how* on chalkboard. Discuss how all lessons in this unit are designed to answer these questions.

1. *Who* will be taught?
   a. Know your audience
   b. Plan lessons to enhance learning
2. *What* will be taught?
   a. Course and unit plans
   b. Content of daily lessons
3. *When* subjects will be presented?
   a. Organization of entire course
   b. Specific timing of each lesson
4. *Where* classes will be held?
5. *Why* course and lessons are needed?
   a. Long-range objective
   b. Daily objectives
6. *How* subjects will be presented?
   a. Understand and use *learning principles* in selecting teaching methods and organizing lessons
   b. Use diverse *teaching methods* to present material
   c. *Plan* how to use teaching methods and teaching aids to enhance learning

G. COURSE GOAL

1. Use material presented in this unit to *teach* shooting responsibility
2. Help participants to become competent instructors

H. ASSIGNMENT **ref. C**

Hand out xeroxed copies of Appendix C.

Remind students of appropriate references for next lesson

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teacher comments:

APPROACH

Laboratory sessions are used to discuss classroom preparation and visual aids. It is important to have all preparations complete before students arrive for class. Visual aids, when used properly, are a valuable addition to the teacher's "bag of tricks." Both sessions will provide information that potential shooting responsibility instructors can use to enhance learning in their classes.

Try to teach laboratories in a two hour block. The sessions are interrelated and instructors can save effort by combining topics. These subjects can be addressed in separate sessions or during lecture times if necessary.

UNIT II LABS

Activities

A. Classroom Preparation
B. Visual Aids

(Suggested time: 2 hours)

FACILITIES and EQUIPMENT

TRAINING AREA

Classroom with sufficient space for displays of a variety of visual aids and suitable for use of 16 mm and slide projectors.

EQUIPMENT AND TEACHING AIDS

Obtain at least one example of each basic type of visual aid discussed in Appendix D. Additional equipment includes the following:

Overhead projector
16 mm projector
35 mm projector
Video and television
Screen
Chalkboard
Flannel board or "Hook-and-loop" board (optional)

ASSISTANT INSTRUCTOR(S) (optional)

Two assistants would be helpful when demonstrating use of various types of projectors. Students can be divided into small groups for demonstrations if assistants are available.

ACTIVITIES

A. CLASSROOM PREPARATION (½ hour)

1. Teach classroom preparation using the room you selected for this session as an example. Discuss important considerations and ask students for suggested improvements of the current classroom setting. The following topics should be included in the discussion:
   a. Why classroom preparation is important
      Makes the right impression on students
      Comfortable students learn more readily
   b. Arrive early

c. Physical facilities
   Accessibility
   Cleanliness
   Comfort (lights, temperature, etc.)
   Adequate space
   Seating arrangement
   Safety
d. Teaching aids
   Clean chalkboard
   Projection equipment checked and in focus (extra bulbs)
   Alternate presentations in case of equipment failure
   Visual aids in place and covered until ready for use
e. Texts and handouts ready for distribution
f. Personal appearance

2. Have students read *Training Course Organization* at home.

B. VISUAL AIDS (1½ hours) **ref. D**

1. Visual aids enhance learning - Describe a trap range or some other facility without using any visual aids. Ask students to draw the facility based on your verbal description. Have several students put their drawings on the chalkboard. Some drawings will be incorrect.

   Repeat the verbal description using a visual aid to supplement your words. Discuss the following advantages of visual aids:
   a. An *aid* to instructors - cannot replace instructors
   b. Create understanding
   c. Increase retention
   d. Motivation - create and maintain interest
   e. Clarify confusing subjects

2. Types of visual aids - Identify types of visual aids using the following list of basic types:
   a. Actual objects
   b. Models
   c. Active graphics
   d. Static graphics
   e. Projected images

   Give examples of visual aids in each category. Be sure to use visual aids properly during this presentation.

3. Visual aid construction - Ask students to identify basic considerations in making visual aids. List their answers on the chalkboard. The following topics should be discussed in this exercise:
   a. Objectives of presentation
   b. Purpose and use of visual (fit to audience)
   c. Cost
   d. Accuracy

e. C B S
O O I
L L M
O D P
R L
F E
U
L

f. Size

g. Durability

Hand out xeroxed copies of Appendix D. Have students read Appendix D

4. Audio-visual equipment - Demonstrate how to set up and operate 16 mm, 35 mm and overhead projectors. If two assistants are available, divide the class into three groups for this exercise. Allow students to practice with equipment in the time remaining.

References and notes

appendices

A. *The Learning Process*
B. *Teaching Methods and Techniques*
C. *Lesson Planning*
D. *Visual Aids*
F. *Overhead Transparencies*

UNIT III

Firearms facts

UNIT III

Firearms facts

(Suggested time: 4 hours)

purpose

This unit deals with the structure and mechanics of firearms. Knowledge of firearms function is a prerequisite to understanding safety and becoming an accomplished marksman. The two classroom sessions and laboratories provide facts useful to all shooting sports students.

Students will handle firearms for the first time during these sessions. Instructors should stress safety and responsible gun handling.

objectives—students will be able to:

1. Identify basic parts of rifles, shotguns and handguns.
2. Explain and demonstrate operation of firearm actions.
3. Describe basic ammunition components.
4. Understand the firing sequence.
5. Understand and demonstrate safe handling of firearms in the classroom.
6. Explain and demonstrate firearms cleaning procedures.
7. Describe proper storage of firearms and ammunition in the home.
8. Understand and demonstrate techniques effective in teaching firearms facts.

evaluation of students

Unit III is not a complete instructional program. However, a written test or quiz based on questions can be given.

Instructors should observe each student's safety practices when firearms are handled in class. Correct unsafe situations immediately.

Lessons

5. Ammunition, Actions
6. Barrels, Stocks

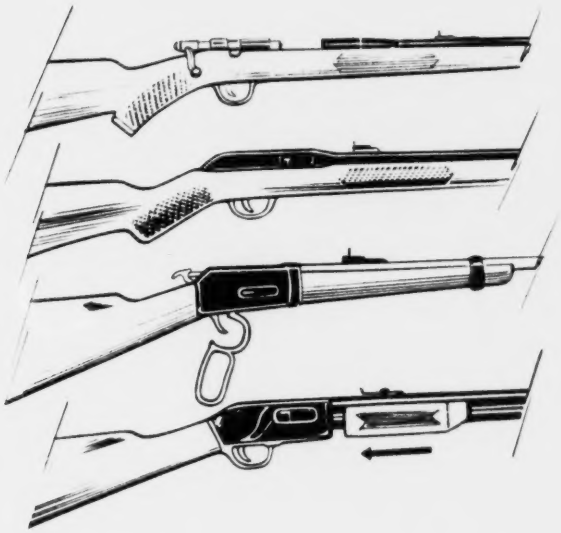
Labs / Activities

A. Basic and Home Safety
B. Firearms Care

Instructor References

Student Texts

UNIT III
LESSON 5
AMMUNITION, ACTIONS



references for instructors

references for students

teaching aids

Examples of actions (at least one firearm)

- ☐ Bolt, lever, pump, semi-automatic, rolling block
- ☐ Hinge - single, side-by-side, over and under
- ☐ Revolvers - single and double action
- ☐ Semi-automatic pistol

☐ Examples of rimfire, centerfire and shotgun ammunition (dummy rounds)
☐ Chalkboard
☐ Bright colored flagging material for muzzles
☐ Metal pipe with cap for one end (optional)
☐ One .22 caliber firearm with BLANK cartridge (optional)
☐ Assistant instructor (recommended)

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. SAFETY 1. Student handling a. Treat every gun as if loaded b. Muzzle in safe direction c. Action open d. Finger off trigger 2. Firearms don't cause accidents, people do	Announce that students will handle firearms during class. List safety rules on chalkboard.
LESSON DEVELOPMENT (40 minutes)	
B. FIREARMS PRINCIPLES 1. First firearms - tube closed at one end 2. Modern firearms - improvements a. Ammunition b. Actions	Hold up pipe or modern firearm. Explain principle and improvements.

C. AMMUNITION COMPONENTS

1. Case
2. Primer - rimfire, centerfire
3. Powder
4. Projectile
5. Round - cartridge, shotshell
6. Firing sequence

Show components using flipchart.
Pass dummy rounds around class.

Explain using flipchart.

D. ASSEMBLY GROUPS - NOMENCLATURE

1. Stock - parts
2. Barrel - parts
3. Action - parts

Demonstrate using firearms or flipchart. Identify basic parts.

E. FIREARMS ACTIONS

1. Bolt
2. Lever
3. Pump
4. Semi-automatic
5. Hinge
6. Rolling block
7. Handguns
   a. Revolvers - single and double action
   b. Semi-automatic pistol

Demonstrate operation of actions using firearms and/or flipcharts. Point out special features (action releases, magazines, safeties, types of triggers, etc.).

F. SAFETIES

1. Mechanical devices
2. Supplement proper gun handling

Discuss.

G. FIREARMS HANDLING

Allow students to operate actions. *Supervise!*
Ask and answer questions.

SUMMARY (5 minutes)

H. ASSIGNMENT

Remind students of appropriate references for next lesson

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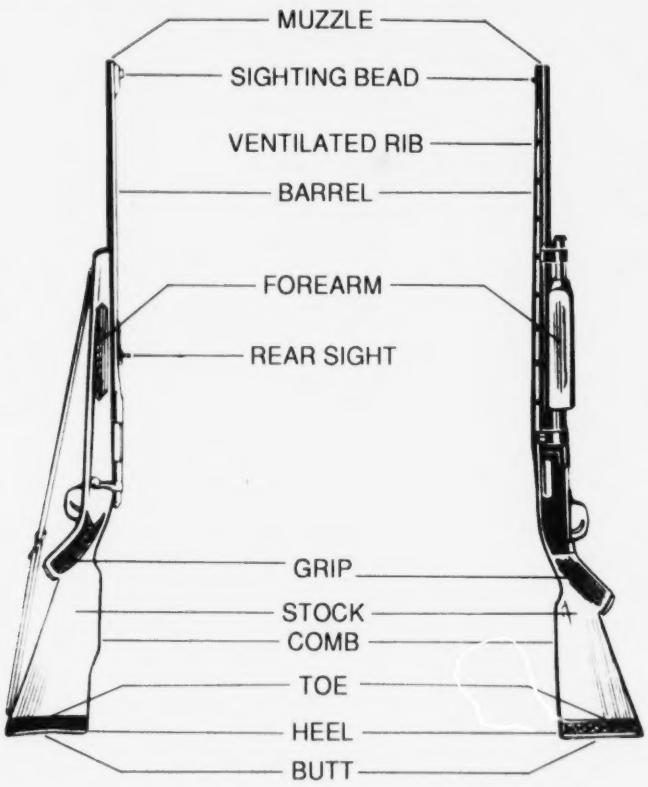
teacher comments:

UNIT III
LESSON 6
BARRELS, STOCKS



references for instructors

references for students

teaching aids

- ☐ One rifle, one shotgun, one handgun - separate stock and barrel if possible
- ☐ Damascus barrel
- ☐ One child's top or football to demonstrate spin of bullet
- ☐ Chalkboard
- ☐ Used patterning target
- ☐ Examples of burst barrels (optional)
- ☐ Assistant instructor (optional)

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. SAFETY - BARRELS 1. Muzzle direction 2. Obstructions 3. Improper ammunition 4. Damascus barrels	Discuss violations of barrel-related safety rules. True stories about accidents or burst barrels are useful. Show Damascus barrel. Explain problem.
LESSON DEVELOPMENT (35—40 minutes)	
B. BARRELS 1. Terminology 2. Thickness - chamber pressure relationship 3. Sights a. Rifles and handguns - types b. Shotgun - bead(s) and ventilated rib 4. Bore - definition	Review using firearm or flipchart. Compare shotgun and rifle barrels. Flipcharts show types of sights. Compare shotgun and rifle barrels.

C. RIFLED BORE
1. Rifles and handguns
2. Lands - grooves
3. Purpose
4. Caliber
   a. Definition
   b. No standardization

Draw picture of rifled bore on chalkboard.

Spinning top or thrown football shows purpose of rifling.

Demonstrate caliber measurement using chalkboard drawing.

D. SMOOTH BORE
1. Shotguns
2. Gauge
   a. Definition
   b. Common gauges and .410
3. Pattern
   a. Shotstring
   b. Chokes
   c. Patterning

Discuss.

Relate pattern factors to adjustable water nozzle.

Show chokes and effective ranges using flipchart.

Describe patterning technique and results using target.

E. MATCH GUN WITH AMMUNITION
1. Rifles, handguns - caliber
2. Shotguns - gauge, chamber length

Use barrels to show location of caliber/gauge stamps on firearms.

F. STOCKS
1. Terminology
2. Measurements
3. Handgun grips

Show stock parts and common measurements using firearm or flipchart.

Rifle with adjustable butt plate is useful to demonstrate measurements.

Use handgun to show grips.

---

teaching tips (5 minutes)

G. INSTRUCTOR - MODEL FOR SAFETY
1. Demonstrate safety
2. Set example for students

Discuss these ideas.

Critique demonstrations given in class.

H. USE BRIGHT FLAGGING ON MUZZLES

I. SUPERVISE STUDENTS

J. BEGINNERS - USE SINGLE SHOT BOLT ACTION?
1. Easy to see chamber
2. Easy to load

Discuss pros and cons.

SUMMARY (5 MINUTES)

K. MATCH FIREARM WITH AMMUNITION

Repeat importance by telling story about improper match.

L. ASSIGNMENT -
Remind students of appropriate references for next lesson

---

teacher comments:

APPROACH

Laboratories include sessions on home firearms safety and gun care. Basic firearms knowledge was covered in LESSONS 5 and 6, so instructors can concentrate on safety and responsible gun handling in the home. Whenever possible, students should actually clean firearms during gun care sessions.

Requirements and content of home safety sessions will vary according to the audience. Each instructor can decide how to best use suggested activities in this section.

UNIT III LABS

Activities

A. Basic and Home Safety
B. Firearms Care

(Suggested time: 2 hours)

FACILITIES and EQUIPMENT

TRAINING AREA

Classroom with tables and enough room for firearms cleaning by paired students

AND

Home used for home safety training (optional - Activity A.1.)

FIREARMS

- ☐ One rifle, one shotgun, one handgun - at least one cleaning kit
- ☐ One muzzleloader (optional)
- ☐ One firearm for each two students - appropriate cleaning kit for each firearm (Optional - Activity B.1.)

OTHER EQUIPMENT

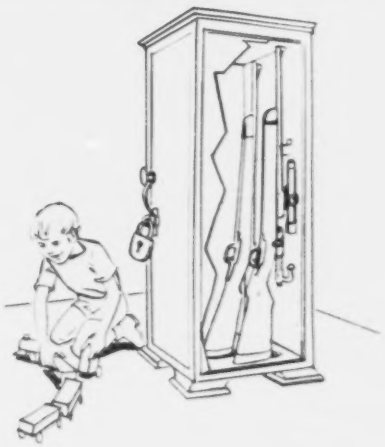
- ☐ Chalkboard

ASSISTANT INSTRUCTOR(S) (optional)

ACTIVITIES

A. BASIC AND HOME SAFETY (1 hour)

Set up a house as a classroom. Have examples of safe and unsafe storage and handling of firearms and ammunition. Ask students to analyze each situation as you proceed and discuss their answers.



teaching tips (instructor classes)

* Analyze your audience - women and children take this class
* Keep it simple and repeat major points
* Be sure everyone can see when demonstrating at home

B. FIREARMS CARE (1 hour)

1. Give a brief demonstration of proper care and cleaning of firearms. Divide students into pairs and have each pair clean a firearm. Discuss care and cleaning when students are finished.
2. When equipment for 1. is not available, demonstrate proper firearms cleaning. Cover the following points:
   a. Why clean firearms
   b. Safety
   c. Cleaning kit components
   d. Proper cleaning techniques and care
   e. Results of improper cleaning and care
   f. Storage of arms and ammunition

teaching tips (instructor classes)

* Learn by doing

References and notes

UNIT IV

Ammunition and reloading

UNIT IV

Ammunition and reloading

(Suggested time: 11 hours)

purpose

UNIT IV provides an introduction to ammunition components and reloading. Two lessons and a handloading demonstration supply background information. Students develop reloading skills through actual participation. If experienced help is needed for teaching or assisting with these sessions, instructors can normally find willing persons in their community.

objectives—students will be able to:

1. Identify basic parts of a round of ammunition.
2. Explain the purpose of each ammunition component.
3. Identify general types of each ammunition component.
4. Relate general types of ammunition components to use.
5. Understand that a variety of ammunition components is available.
6. Understand general procedures for selecting and inspecting reloading components.
7. Understand and recognize the need for safe storage and handling of reloading components.
8. Explain and demonstrate basic reloading procedures.

evaluation of students

Prepare a list of shooting situations. Ask students to design and justify a handload they would recommend for the circumstances described.

Observe students during laboratories to evaluate understanding of ammunition components and reloading procedures. Correct poor safety practices immediately.

Lessons

7. Cases, Primers and Powders
8. Projectiles

Labs / Activities

A. Reloading Demonstration
B. Reloading by Students

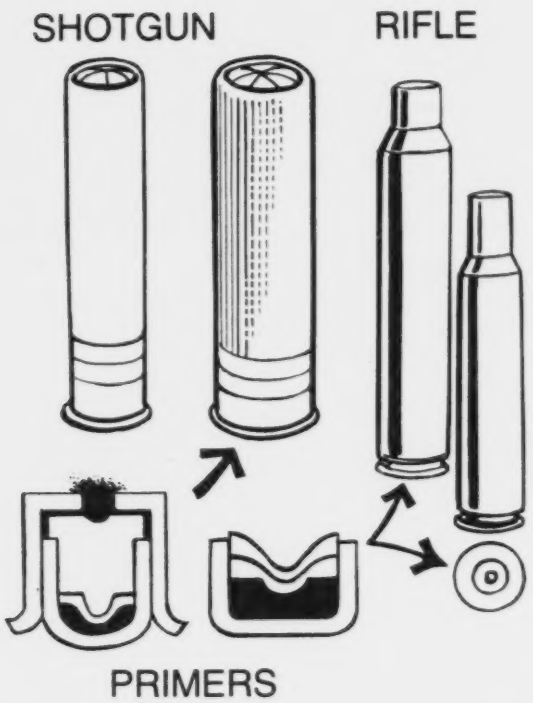
Instructor References

Appendices: F

Student Texts

UNIT IV
LESSON 7

CASES, PRIMERS AND POWDERS



references for instructors
Appendices: **F**

references for students

teaching aids

- ☐ **ref. F** Prepare overhead transparencies
  - 13. Case Types
  - 14. Headspace
  - 15. Primers
- ☐ Overhead projector
- ☐ Screen
- ☐ Chalkboard
- ☐ Matches
- ☐ Surface suitable for powder burning demonstration
- ☐ Powders for burning demonstration (several burning rates)
- ☐ Metallic, plastic and paper cases (one each)
- ☐ Displays - they don't have to be elaborate
  - Examples of cartridge and shotshell cases
  - Examples of primers
  - Types of powders

content outline	**teaching methods**
INTRODUCTION (5 minutes)	
A. WHY HANDLOAD 1. Reduces cost 2. Tailor-made loads 3. Fun	Ask students for handloading benefits. List on chalkboard. Discuss.
B. IS RELOADING SAFE?	Briefly discuss.
LESSON DEVELOPMENT (43 minutes)	
C. REVIEW AMMUNITION COMPONENTS	Use flipchart. Ask students the purpose of each component.

D. METALLIC CASES — Pass examples around class.
1. Case parts - nomenclature — Draw case outline on chalkboard. Label parts. Transparency 13.
2. Types
   a. Rifles
   b. Handguns

E. PLASTIC AND PAPER CASES — Pass examples around class.
1. Shotguns
2. Case parts - nomenclature — Draw case outline on chalkboard. Label parts. Compare to metallic case.
3. Types
   a. Low base vs. high base — Explain using chalkboard drawing.
   b. Shell length and chamber length — Explain relationship.

F. HEADSPACE — Transparency 14.
1. Definition
2. Common headspacing systems

G. PRIMERS
1. Priming systems — Identify general priming systems. List on chalkboard.
   a. Historical - match, wheel, flint, cap
   b. Modern - rimfire and centerfire
2. Types of primers — Transparency 15.
   a. Berdan - European
   b. Boxer - components and general sizes
   c. Battery cup - shotguns

Tell a story about accident with primers.

H. POWDERS — Describe and discuss.
1. Black powder
   a. Chemicals - corrosive — List chemicals on chalkboard.
   b. Burning characteristics
   c. Sizes
   d. Pyrodex - modern substitute
2. Smokeless powders
   a. Single base
   b. Double base
   c. Dram equivalents - shotshells
   d. Size, shape and burning rates — Do a powder burning demonstration using small amounts of powders with different burning rates.

I. DISPLAYS — Allow students to view displays.

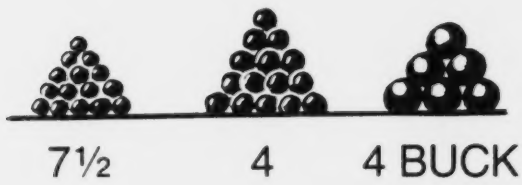
SUMMARY (2 minutes)

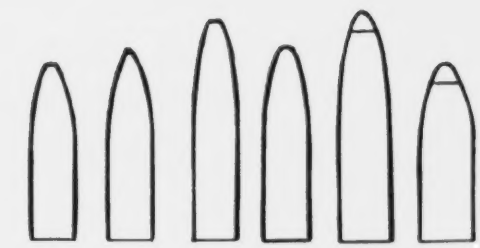
J. ASSIGNMENT

Remind students of appropriate references for next lesson

teacher comments:

PROJECTILES





references for instructors
Appendices: **F**

references for students

teaching aids

- ☐ One football and one tennis ball
- ☐ Overhead projector
- ☐ Screen
- ☐ **ref. F** Prepare overhead transparencies
  - 16. Bullet Shapes
  - 17. Jacketed Bullets
  - 18. Cast Bullets
  - 19. Shot Sizes
- ☐ Chalkboard
- ☐ Displays - they don't have to be elaborate
  - Examples of jacketed, cast and plastic bullets
  - Shotgun slugs
  - Shot sizes
  - Examples of wads
  - Bullet mold (optional)

content outline	teaching methods
INTRODUCTION (3 minutes)	
A. FIT PROJECTILE TO PURPOSE	Throw football and tennis ball to separate students. Compare specific uses of balls with specialized uses of firearms projectiles.
LESSON DEVELOPMENT (38 — 40 minutes)	
B. VARIETY OF PROJECTILES	
1. Projectile for every use	Hold up some examples.
2. Selection critical	Discuss importance. Give examples.
C. PROJECTILES FOR RIFLED ARMS	Discuss.
1. General bullet shapes	Transparency 16.
a. Rifle	
b. Handgun	

2. Jacketed bullets	
a. Component metals	List on chalkboard.
b. Jacketing - types	Transparency 17.
c. Cannelure(s) - purpose	
d. Type related to use	Give examples of uses.
3. Cast bullets	
a. Component metals	List on chalkboard.
b. Gas checks - purpose	Transparency 18.
c. Lubrication grooves - purpose	
d. Type related to use	Give examples of uses.
e. Molding your own bullets	Advise students that this is possible.
4. Other bullet types	Describe these bullets. Relate use for each type.
a. Plastic or wax - use	
b. Shot - use	
D. SMOOTH BORE PROJECTILES	
1. Lead slug	Draw outline of slug on chalkboard. Explain purpose of each part.
a. "Rifling" on slug - purpose	
b. Concave base - purpose	
c. Uses	Briefly discuss uses.
2. Lead shot	
a. Sizes - numbering system	Transparency 19.
b. Size related to use	Describe uses of some shot sizes.
3. Other types of shot	Describe. Relate to use.
a. Hardened shot	
b. "Steel" shot	
c. Others - selected by instructor	
E. SPECIAL COMPONENTS - WADS	Ask students for purposes of wads. Discuss.
1. Purposes	
2. Types	
a. Cardboard and filler wads	
b. Plastic wads and shot collars	
F. DISPLAYS	Allow students to view displays.

---

teaching tips (2 minutes)

G. TEACHING HELP FOR RELOADING CLASSES	Discuss.
1. Get help for unfamiliar subjects	
2. Use available resource people	

SUMMARY (5 minutes)

H. AMMUNITION COMPONENTS
1. Cases
2. Primers
3. Powders
4. Projectiles
   a. Variety available
   b. Fit to purpose

List four components on chalkboard. Describe shooting situations and ask students to describe proper ammunition. Discuss.

I. ASSIGNMENT

Remind students of appropriate references for next lesson

teacher comments:

UNIT IV LABS

Activities

A. Reloading Demonstration
B. Reloading by Students

(Suggested time: 9 hours)

APPROACH

Learning through participation in reloading is the primary goal in these sessions. Instructors can design laboratories with this goal in mind. However, reloading laboratories will vary according to the facilities and equipment available. Contact individuals and businesses in your community who may be willing to help.

FACILITIES and EQUIPMENT

RELOADING FACILITIES

Several options exist for obtaining or using reloading equipment:

- Sporting goods dealers may conduct seminars
- Reloading industry personnel may provide workshops
- Equipment may be purchased and set up on a permanent basis
- Reloading enthusiasts in the community may have room for conducting classes in their home or garage
- Portable equipment may be taken into the classroom

EQUIPMENT and SUPPLIES

Reloading devices and components bought in quantities for several students adds much to a budget. Total costs of shooting programs can be reduced when reloading is part of overall activities.

ACTIVITIES

A. RELOADING DEMONSTRATION (2 hours)

Visit a reloading room. Discuss and demonstrate the following topics:

1. Safe storage and handling of reloading components
2. Inspection of cases and other ammunition components
3. Selection of loads and components - use of manuals
4. Reloading procedures for metallic ammunition and shotshells

B. RELOADING BY STUDENTS (7 hours)

Have students reload ammunition with available equipment. Use coach-pupil method with strict supervision by instructors. Safety is paramount.

---

teaching tips (instructor classes)

* Learn by doing

Ammunition and reloading

References and notes

appendices

F. *Overhead Transparencies*

UNIT V

Rifles and air guns

UNIT V

Rifles and air guns

(Suggested time: 14 hours)

purpose

UNIT V covers basic rifle marksmanship training and rifle sports. In addition to providing traditional rifle instruction, students learn about teaching with air guns and range development. Students use classroom knowledge on the shooting range to help develop shooting and coaching skills.

objectives—students will be able to:

1. Understand and demonstrate safe handling of rifles.
2. Understand and apply fundamentals of basic rifle marksmanship.
3. Demonstrate and shoot from prone, sitting, kneeling, standing and bench rest positions.
4. Understand use of slings and shooting equipment.
5. Understand and describe reasons for using air guns in marksmanship training.
6. Understand basic types of air guns and air gun training programs.
7. Describe general categories of rifle sports.
8. Understand and recognize the need for proper conduct on ranges.
9. Understand basic range development and operations.
10. Understand and demonstrate techniques and exercises used in rifle training.
11. Help shooters detect shooting errors and suggest corrections.

evaluation of students

Students should take a written test concerning basic rifle marksmanship.

Instructors can observe performance in laboratories to evaluate shooting and coaching skills. An oral examination concerning basic marksmanship, coaching skills and shooting positions is recommended for instructor classes.

Lessons

9. Sights
10. Rifle Shooting Technique
11. Shooting Positions and Equipment
12. Teaching with Air Guns
13. Rifle Sports and Ranges

Labs/Activities

A. Indoor Range Shooting
B. Outdoor Range Shooting

Instructor References

Appendices: E, F

Student Texts

UNIT V
LESSON 9
SIGHTS

MASTER EYE

references for instructors

Appendices: **F**

references for students

teaching aids

- ☐ One rifle with iron sights
- ☐ One rifle target (triangulation exercise)
- ☐ Chalkboard
- ☐ Overhead projector (optional)
- ☐ Screen (optional)
- ☐ **ref. F** Prepare overhead transparencies (optional)
  - 20. Sights
  - 21. Shot Groups
- ☐ Paige Sighting Device (optional)
- ☐ Sighting bar (optional)

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. MASTER EYE	
1. Two general methods of determination 2. Importance 3. Conflicting hand/eye dominance	Demonstrate methods and have students determine master eye. Discuss.
LESSON DEVELOPMENT (40 minutes)	
B. REVIEW TYPES OF SIGHTS	Ask students to identify types. List on chalkboard.
1. Ironsights a. Open b. Aperture 2. Telescopic	
C. SIGHT SELECTION	
1. Type of shooting determines "best" sight	Have students vote on "best" sight. Give examples where each sight type is best.
2. One rifle - several types of sights a. Simple procedure to change sights b. Fit to purpose of shooting	Discuss interchanging rifle sights.

D. SIGHT ALIGNMENT
1. Definition
2. Open sights
3. Aperture sights
4. Telescopic - no alignment

Demonstrate correct alignment using flipcharts, chalkboard drawings or transparency 20.

E. SIGHT PICTURE
1. Definition
2. Front post sight - sight picture
   a. Clock system on target
   b. Six o'clock hold
3. Front aperture sight - center hold
4. Telescopic - normally center hold
5. Sight picture training devices
   a. Triangulation exercise
   b. Paige sighting device
   c. Sighting bar

Demonstrate correct sight picture using chalkboard drawings or transparency 20.

Demonstrate actual exercise. Use student as assistant.
Describe use.
Describe use.

F. SIGHT ADJUSTMENT
1. Shoot groups first - reasons
   a. Proper sight picture
   b. Fundamentals mastered
2. Adjustment
   a. Iron sights - rule
   b. Telescopic sights - use directions indicated on scope
   c. Elevation - vertical adjustment
   d. Windage - horizontal adjustment
3. Minute of angle - definition
   a. Micrometer sights
   b. Target sights
   c. Telescopic sights
4. Zeroing (sighting in)
   a. Definition
   b. Procedure
   c. Point - blank zeroing

Use chalkboard drawing or transparency 21 to show shot grouping.

Define rule and give examples with chalkboard drawing or transparency 21.
Discuss.

Define and relate to points 3.a., b. and c.

Define and describe general procedure.

G. SCORING TARGETS

Give example. Use chalkboard drawing or transparency 21.

SUMMARY (5 minutes)

H. SUCCESSFUL SHOOTING
1. Select the right sight
2. Tight groups come first
   a. Master shooting fundamentals
   b. Understand sight alignment and picture
3. Adjust and zero

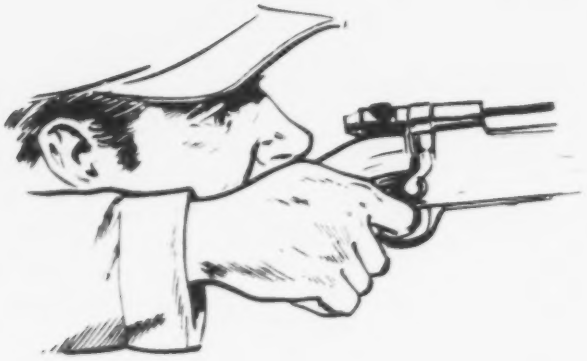
Repeat importance of completing steps H.1., 2. and 3. in sequence.

I. ASSIGNMENT - Remind students of appropriate references for next lesson

teacher comments:

UNIT V
LESSON 10

RIFLE SHOOTING TECHNIQUE



references for instructors

Appendices: **E**

references for students

teaching aids

- ☐ One rifle - any type
- ☐ Chalkboard
- ☐ Food baster or sponge (trigger squeeze demonstration)
- ☐ Pan of water for food baster/sponge demonstration of trigger squeeze

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. CONCENTRATION 1. Effects of distractions - poor performance 2. Importance in shooting	Compare effects of distractions while driving a car or trying to study an assignment with distractions while shooting. Discuss importance of concentration.
LESSON DEVELOPMENT (30—40 minutes)	
B. BREATH CONTROL 1. Proper breathing - procedure	Explain proper breathing. Have students try technique.
2. Improper breathing - results a. Holding too much air in lungs b. Holding breath too long	Give examples of improper breathing.
C. RELAXATION 1. Comfort - proper body function	Discuss. Details covered in LESSON 11.
2. Uncomfortable a. Muscle strain b. Poor circulation	Identify results of shooting when uncomfortable.

D. AIMING

1. Both eyes open - use master eye
2. Head erect normally - minimize eye muscle strain
3. Eye relief - distance from eye to rear sight
   a. Varies with shooter - averages 2 to 6 inches
   b. Too close - worry about recoil
   c. Too far - strain eye for clear sight picture
4. Shooting with corrective lenses
   a. Look through center of lens - keep head erect
   b. No disadvantage for shooter

Discuss and list on chalkboard.

Demonstrate relief using firearm or chalkboard drawing.

E. TRIGGER SQUEEZE

1. Proper squeeze
   a. Trigger finger position
   b. Pull straight back
   c. Shot should "surprise" you
2. Improper squeeze - results

Describe squeeze. Demonstrate using baster or sponge.

Explain results of improper squeeze. Use baster or sponge to demonstrate.

F. FOLLOW THROUGH

1. Reasons
2. Calling the shot
   a. Shooter identifies mistakes
   b. Target clock system

Discuss importance.

Explain.

Draw on chalkboard. Give examples of calling shots.

G. RHYTHM AND HABIT

Discuss importance. Relate to rhythms and habits required in other sports.

H. TARGET ANALYSIS

1. Helps instructor identify mistakes
2. Student sees result of improper shooting technique

Explain purpose of target analysis. Give examples using chalkboard drawing.

---

teaching tips (10 minutes)

I. COMMON MISTAKES TO LOOK FOR
ref. E

1. Unnatural breathing
2. Muscles tense
3. Head position and eye relief problems
4. Trigger finger placement
5. Trigger jerk and flinching
6. Failure to follow through

Identify common mistakes. List on chalkboard.

J. INSTRUCTOR RESPONSIBILITY

1. Identify errors
2. Suggest corrections

Discuss.

SUMMARY (5 minutes)

K. SHOOTING TECHNIQUE

List BRASS anagram on chalkboard as good way to remember proper technique.

1. B - breathe
2. R - relax
3. A - aim
4. S - squeeze
5. S - squeëze more (follow through)

L. ASSIGNMENT - Remind students of appropriate references for next lesson

teacher comments:

UNIT V
LESSON 11
SHOOTING POSITIONS AND EQUIPMENT

references for instructors

Appendices: **E**

references for students

teaching aids

- ☐ Open area for position demonstrations
- ☐ Assistant instructor
- ☐ One rifle with sling
- ☐ Ear plugs and/or protectors
- ☐ Shooting glasses
- ☐ Chalkboard
- ☐ One target rifle (optional)
- ☐ Shooting equipment (optional)
  - Shooting jacket
  - Shooting glove
  - Kneeling roll
  - Spotting scope

content outline	teaching methods
INTRODUCTION (2 minutes)	
A. PROTECT YOURSELF 1. Ear protection 2. Shooting glasses	Tell story about loss of hearing or sight due to shooting without safety equipment. Show ear plugs and glasses.
LESSON DEVELOPMENT (43 minutes)	
B. SHOOTING EQUIPMENT 1. Sling a. Purpose b. Proper use 2. Shooting jacket 3. Shooting glove 4. Kneeling roll 5. Target rifle a. Adjustable butt plate b. Adjustable sling swivel 6. Spotting scope 7. Other - provided by instructor	Explain equipment use. Ask students what slings are used for. Demonstrate sling use with firearm. Show students available equipment.

C. POSITION FUNDAMENTALS

Discuss fundamentals. List points on chalkboard.

1. Relaxation essential
   a. Reasonable comfort - awkward at first
   b. Use bones for support
2. Form triangles for stability
   a. Sling
   b. Bones
   c. Floor

Describe how sling, bones and floor form stable triangles.

3. Natural point of aim
   a. No strain on body
   b. Shift entire position to adjust

Describe procedure for finding point of aim.

4. Fundamentals same for everyone

D. PRONE POSITION **ref. E**

Demonstrate using assistant. Point out positioning of each body part.

1. Body orientation and position
2. Legs
3. Supporting arm and hand - sling use
4. Trigger arm and hand
5. Head position

E. SITTING POSITION (CROSSED LEGS) **ref. E**

Demonstrate.

1. Body orientation and position
2. Legs
3. Supporting arm and hand - sling use
4. Trigger arm and hand
5. Head position
6. Variations of sitting position - open legs, crossed ankles

Demonstrate variations.

F. KNEELING POSITION **ref. E**

Demonstrate.

1. High position
   a. Body orientation and position
   b. Legs - kneeling roll
   c. Supporting arm and hand - sling use
   d. Trigger arm and hand
   e. Head position
2. Low position

Demonstrate low position.

G. STANDING POSITION (NRA) **ref. E**

Demonstrate.

1. Body orientation and position
2. Legs
3. Supporting arm and hand
4. Trigger arm and hand
5. Head position

SUMMARY (5 minutes)

H. PRACTICE - KEY TO SUCCESS

Discuss practice. Tell how top-notch competitive shooters train.

1. Shooting fundamentals - BRASS

Repeat importance.

2. Positions - reasonable comfort
   a. Form triangles
   b. Use bones for support
   c. Natural point of aim

I. ASSIGNMENT

1. Remind students of appropriate references for next lesson
2. Marksmanship instructors should have a checklist of requirements for proper shooting positions. Have each student prepare a list covering important points about each position (instructor classes).

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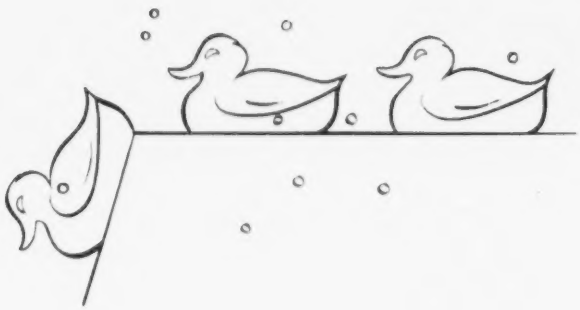
teacher comments:

UNIT V
LESSON 12

TEACHING WITH AIR GUNS



references for instructors

references for students

teaching aids

- ☐ Examples of air guns (at least one air gun)
  Spring, pneumatic, gas
  Rifles and Pistols
- ☐ Pellets - .177 and .22 caliber
- ☐ BB's

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. EUROPEAN VS. AMERICAN USES	Compare uses of air guns. List on chalkboard.
1. European a. Military use - Waterloo b. Adult use - precision sport today 2. American a. Teenagers b. Increasing popularity today	Hold up air gun. Tell story of its use at Waterloo.
LESSON DEVELOPMENT (38—40 minutes)	
B. USE OF AIR GUNS 1. Basic marksmanship training 2. Practice 3. Plinking 4. Competition - 15, 25, 33 feet (10 meters)	Give examples of each use. List categories on chalkboard.
C. COMMON TYPES OF AIR GUNS 1. Spring 2. Pneumatic 3. Gas	Demonstrate with actual air guns or describe operation.

D. COMMON PROJECTILES 1. Pellets - .177 and .22 caliber 2. BB's	Pass examples around classroom.
E. FILM - MERITS OF USING HANDGUNS IN TEACHING	Introduce film. Have students note advantages and disadvantages to air gun use in teaching.
F. TEACHING WITH AIR GUNS 1. Advantages - many 2. Disadvantages - few	Ask students to identify advantages and disadvantages of air gun programs. List on chalkboard.
G. AIR GUN PROGRAMS 1. Daisy or other kit	
2. National Rifle Association a. Basic training course b. Qualification courses - awards c. Sanctioned matches	Describe contents of basic kit. Briefly discuss NRA-sponsored programs.
3. Other kits and programs exist	Advise.

teaching tips (2 minutes)

H. COACH-PUPIL METHOD 1. Both students hear all instruction 2. Help each other 3. Safety	Introduce coach-pupil system. Point out values.
I. EMPHASIZE SHOOTING FUNDAMENTALS, NOT ACCURACY	Discuss this point.

SUMMARY (5 minutes)

J. VERSATILITY OF AIR GUNS	Repeat major advantages of air gun use.
K. ASSIGNMENT - Remind students of appropriate references for next lesson	

teacher comments:

UNIT V
LESSON 13
RIFLE SPORTS AND RANGES

references for instructors

references for students

teaching aids

- ☐ Chalkboard
- ☐ Examples of plinking games (e.g. - balloons, cans, etc.)
- ☐ Examples of targets
  - Indoor rifle
  - Outdoor rifle

content outline	teaching methods
INTRODUCTION (2 minutes)	
A. RIFLE SPORTS 1. Plinking 2. Hunting 3. Target shooting on range a. Informal b. Formal	List sports on chalkboard. Ask students which categories they participate in.
LESSON DEVELOPMENT (43 minutes)	
B. PLINKING 1. Indoors and outdoors 2. Plinking games - use imagination	Give examples. Hold up visual aids and explain games.
3. Safety a. Be sure of backstop and beyond b. Never shoot over water - *ricochets* c. Supervise young shooters d. Follow all gun safety rules e. Others - provided by instructor	Tell stories about potential dangers while plinking.

4. Conduct
   a. Get landowner's permission
   b. Pick up litter - cans, brass, etc.
   c. Never shoot at glass objects
   d. Others - provided by instructor

Discuss these ideas. Ask students if they have seen examples of improper conduct.

C. HUNTING WITH RIFLES

1. General categories
   a. Varmints
   b. Small game and upland game birds
   c. Big game
2. Safety and conduct

List categories on chalkboard.
Give brief example of each category.

Give brief example of unsafe and/or unethical practice. Details covered in UNITS X and XI.

D. INDOOR RIFLE RANGE SHOOTING

1. Informal
2. Formal competitions - examples
   a. Air guns
   b. .22 caliber
3. Indoor range facilities
   a. Distance
   b. Backstop
   c. Lighting-fixture protection
   d. Window and ceiling protection
   e. Ventilation
   f. Noise
   g. Target height and retrieval
   h. Spectators

Give examples of common rifle competitions. Show NRA rules and assorted targets.

Ask students to identify considerations and draw picture of range as you go.
OR
Draw indoor range illustration on chalkboard before class.

E. OUTDOOR RIFLE RANGE SHOOTING

1. Informal
2. Formal competition - examples
   a. Smallbore
   b. Large bore
   c. Novelty matches
   d. Postal matches
3. Outdoor range facilities
   a. Distance - varies
   b. Backstop
   c. Impact zone
   d. Direction and incline
   e. Prevailing winds
   f. Spectators
   g. Security

Give examples of common rifle competitions. Show NRA rules and assorted targets.

Have students identify considerations and draw picture of range as you go.
OR
Draw outdoor range illustration on chalkboard before class.

F. RANGE COMMANDS

Give example of general range procedure.

SUMMARY (5 minutes)

G. RIFLE SPORTS FOR EVERYONE
   1. Plinking
   2. Hunting
   3. Target shooting - ranges

Discuss. Repeat major categories of sports.

H. BE RESPONSIBLE — Discuss.
   1. Safety
   2. Conduct

I. ASSIGNMENT
   Remind students of appropriate in next
   references for next lesson

---

teacher comments:

UNIT V LABS

Activities

A. Indoor Range Shooting
B. Outdoor Range Shooting

(Suggested time: 9 hours)

APPROACH

Development of shooting and coaching skills are primary goals for rifle laboratories. Use coach-pupil pairs and allow students to control range activities whenever possible. Assistant instructors may be needed for large classes.

Firing on indoor and outdoor ranges is recommended. However, these laboratories can be adjusted to the facilities available. Instructors can fit suggested activities to meet their needs.

FACILITIES and EQUIPMENT

SHOOTING AREA

Rifle ranges available in your area can normally be located by contacting the following sources:

- Gun clubs
- Law enforcement agencies
- Military and ROTC units
- Sporting goods dealers
- Wildlife agencies

Try to locate ranges which are easily accessible. Many organizations have policies allowing use of facilities at no cost for training courses.

RIFLES and AMMUNITION

Fundamentals of rifle shooting can be learned with any type of rifle. If all suggested activities are used, instructors will need the following firearms with appropriate ammunition and accessories:

- ☐ Air rifles
- ☐ Rimfire rifles
- ☐ Centerfire rifles - several calibers
- ☐ Muzzleloaders and accessories

Instructors should contact gun clubs, businesses, military units and firearms manufacturers as possible sources for rifles. For example, Remington Arms Company has a consignment policy for target grade rifles used in school programs. One rifle for each two or three students is ideal.

Buying commercial ammunition in bulk is generally cheaper than asking students to buy their ammunition separately. Centerfire cartridges can be reloaded to reduce costs.

TARGETS

Select targets according to the range(s) and rifle(s) to be used.

OTHER EQUIPMENT

- ☐ Ear protection for each student
- ☐ Shooting glasses for each student
- ☐ Tape or stapler
- ☐ Dummy ammunition for ball and dummy exercises
- ☐ Benches and sandbags for bench rest shooting (Activity B.)

ASSISTANT INSTRUCTOR(S)

Experienced instructors can supervise six pairs of students according to the NRA. The number of assistants will determine how many students can fire at one time.

ACTIVITIES

A. INDOOR RANGE SHOOTING - AIR RIFLES and/or RIMFIRE RIFLES (6 hours) **ref. E**

1. Range tour - Instructor classes should tour range facilities. Evaluate range design using checklist
2. Discuss range commands, safety rules and conduct. Identify unwritten rules of the range such as:
   a. Keep quiet - respect other shooters
   b. Have equipment ready
   c. Keep your firing point clean
   d. Don't give unsolicited advice
   e. Help shooters who ask for advice
   f. Others - provided by instructors
3. Shooting and coaching tips - Review operation of rifles available to students. Demonstrate shooting position. Review common shooting errors that coaches may observe, including:
   a. Muscles tense
   b. Improper breathing
   c. Trigger finger placement
   d. Trigger jerk
   e. Flinching and failure to follow through
   f. Position checklist:
      - ☐ Body orientation
      - ☐ Legs
      - ☐ Supporting arm and hand - sling use
      - ☐ Trigger arm and hand
      - ☐ Head
4. Dry firing (prone position) - Using relay system, have each student practice shooting technique by dry firing. Coaches watch for errors and suggest corrections.
5. Familiarization firing (prone position) - Relays fire five rounds to get acquainted with firearms being used.
6. Ball and dummy exercise (prone position) - This activity is used to detect flinching. Coaches load a live or dummy round while pupils are not looking. When the firing pin falls on an empty round, the shooter's reaction can be observed to check for flinching. Each relay should shoot 10 rounds using this procedure.
7. Firing (prone position) - Relays fire a set number of rounds before rotating. Students practice calling shots and sights are adjusted when a "tight group" can be demonstrated. Targets are scored by the shooters and they try to improve their score.
8. Changing positions - Once shooters show ability to shoot "groups" in prone position, steps A.3., 4., 5. and 6. are practiced in other positions. Order of difficulty for positions is prone, sitting, kneeling and standing.

teaching tips (instructor classes)

* Instructor's responsibility is to detect errors and suggest corrections.
* Instructors recognize sound shooting fundamentals, not bullseyes.
* Students may tire easily in first shooting sessions. Don't overdo it.
* Inspect any student-owned firearm used in shooting exercises.
* You don't have to be a good shot to be a good instructor.
* Experienced instructors can supervise six pairs of students. Inexperienced instructors can handle two pairs (NRA guidelines).

B. OUTDOOR RANGE SHOOTING - CENTERFIRE and/or RIMFIRE RIFLES, MUZZLELOADERS (3 hours)

NOTE: Activity B. should not start until students have completed Activity A. Recoil from centerfire rifles may cause flinching if not properly introduced. A progression of rifle calibers is suggested. If several calibers are not available, use rimfire rifles for Activity B. This is a familiarization exercise, not a test of the punishment students take.

1. Range tour - Instructor classes should learn about range facilities. Proceed as in Activity A.1.
2. Discuss range commands, safety rules and conduct. Proceed as in Activity A.2.
3. Bench rest position - Introduce and demonstrate bench rest position. Fire several rounds. Students observe recoil of rifles used.
4. Discuss recoil. Explain how to handle recoil with large caliber rifles.
5. Dry firing - Review operation of rifles to be used. Have relays practice dry firing in bench rest position.
6. Firing - Each relay shoots one three-shot group using progressively larger calibers. Coaches should perform ball and dummy exercise (see Activity A.5.) to detect flinching.

teaching tips (instructor classes)

*Avoid flinch development through proper instruction

Rifles and air guns

References and notes

appendices

E. *Shooting Positions Checklists*

F. *Overhead Transparencies*

REFERENCES

UNIT VI
Handguns

UNIT VI
Handguns

(Suggested time: 6 hours)

purpose

UNIT VI supplies classroom and field training in basic handgun marksmanship. Students also learn about handgun sports and gun legislation during classroom instruction. These sessions are followed by laboratories which allow students to develop shooting and coaching skills.

objectives—students will be able to:

1. Understand and demonstrate safe handling of handguns.
2. Understand and apply fundamentals of basic handgun marksmanship.
3. Demonstrate and shoot from positions used for target and field shooting with handguns.
4. Describe general categories of handgun sports.
5. Discuss gun legislation and the gun control issue.
6. Understand and recognize the need for proper conduct on ranges.
7. Understand basic range construction and operations.
8. Understand and demonstrate techniques and exercises used in handgun training.
9. Help shooters detect shooting errors and suggest corrections.

evaluation of students

Students should take a written test concerning basic handgun marksmanship. Instructors can observe performance in laboratories to evaluate shooting and coaching skills. An oral examination covering basic marksmanship and coaching skills is recommended for instructor classes.

Lessons

14. Handgun Shooting Technique
15. Handgun Sports and Gun Legislation

Labs/Activities

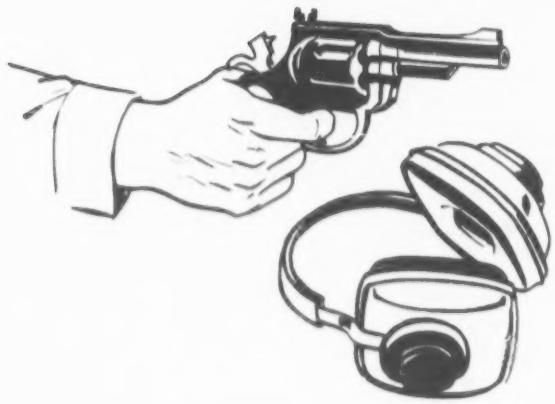
A. Range Operation
B. .22 Caliber Handgun Shooting - Bench Rest
C. .22 Caliber Handgun Shooting - Other Positions
D. Timed and Rapid-fire Demonstration
E. Centerfire Handgun Shooting

Instructor References

Appendices: E

Student Texts

UNIT VI
LESSON 14
HANDGUN SHOOTING TECHNIQUE



references for instructors

Appendices: **E**

references for students

teaching aids

- ☐ One toy handgun
- ☐ Revolvers - single action and double action
- ☐ One semi-automatic pistol
- ☐ One single shot pistol (optional)
- ☐ One rifle
- ☐ Chalkboard
- ☐ Food baster or sponge (trigger squeeze demonstration)
- ☐ Pan of water for demonstration of trigger squeeze
- ☐ Ear plugs and/or protectors
- ☐ Shooting glasses
- ☐ Assistant instructor (optional)

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. HANDGUN SAFETY 1. Unique concerns a. Quickdraws b. Short barrel c. One hand support 2. Protect yourself a. Ear protection b. Eye protection	Identify and discuss unsafe practices on television shows such as western movies. Use toy handgun to show unique safety concerns for handguns. Hold up ear protectors and shooting glasses.
LESSON DEVELOPMENT (40 minutes)	
B. HANDGUN ACTIONS 1. Revolvers a. Single action b. Double action 2. Pistols	Review handgun parts and operation using handguns or flipcharts.

C. GRIP **ref. E**	
1. Revolver a. Palm b. Trigger finger c. Thumb d. Remaining fingers	Show how to position handgun for proper grip. Demonstrate grip.
2. Pistol	Demonstrate grip. Caution about slide movement when firing.
3. Custom fitting grips to individual	Briefly discuss. Show variety using available handguns.
D. SHOOTING POSITION - ONE HAND **ref. E**	Demonstrate proper position starting with feet and moving upward. Use assistant.
1. Comfort and relaxation a. Body orientation b. Feet c. Legs and knees d. Trigger arm - shoulder, elbow, wrist and hand e. Trailing arm f. Head	
2. Natural point of aim	Describe. Show how feet are shifted to obtain natural aim.
E. AIMING	
1. Both eyes open - master eye	Discuss.
2. Sight alignment	Review sight alignment. Draw chalkboard example of proper alignment.
3. Sight picture a. Focus on front sight, not bullseye b. Six o'clock hold	Add bullseye to chalkboard drawing. Bullseye should appear to be out of focus.
4. Area of aim (wobble area) a. Handgun *will* move b. Practice reduces wobble	Compare stability of rifle and handgun using actual objects.
F. TRIGGER SQUEEZE 1. Steady rearward pressure 2. Grip doesn't change 3. Shot should surprise you	Demonstrate proper and improper squeeze using food baster or sponge.
G. BREATH CONTROL	Describe and demonstrate proper breath control.
H. FOLLOW THROUGH	Discuss.
1. Reasons	
2. Calling shots	Draw target on chalkboard. Explain calling shots.
3. Flinching a. Causes b. Ball and dummy exercise	Describe exercise.
I. RHYTHM AND HABIT	Discuss. Relate to rhythms required for other sports such as baseball.
1. Work on each shot individually a. Develop a routine for each shot b. Concentrate	

2. Dry firing
   a. Practice fundamentals and develop rhythm
   b. Conditions shoulder, arm and trigger finger

J. TARGET ANALYSIS

1. Helps instructors identify errors
2. Student sees results of poor shooting technique

Explain purposes of target analysis. Give examples using chalkboard drawing of target.

SUMMARY (5 minutes)

K. PROPER GRIP

Repeat importance.

L. SHOOTING TECHNIQUE

B - breathe
R - relax
A - aim
S - squeeze
S - squeeze more (follow through)

List BRASS anagram on chalkboard as good way to remember shooting fundamentals.

M. ASSIGNMENT

Remind students of appropriate references for next lesson

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teacher comments:

UNIT VI
LESSON 15

HANDGUN SPORTS AND GUN LEGISLATION

references for instructors

references for students

teaching aids

- ☐ One revolver
- ☐ One pistol
- ☐ Chalkboard
- ☐ Examples of slow, timed and rapid-fire targets
- ☐ Examples of plinking games (e.g., cans, crackers, balloons, etc.)
- ☐ Assistant instructor (optional)

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. MISCONCEPTIONS ABOUT HANDGUNS 1. Only use for handguns is for criminal purposes 2. Handguns are inherently dangerous	Ask students to identify misconceptions about handguns. Briefly discuss using comparisons with automobile
LESSON DEVELOPMENT (40 minutes)	
B. HANDGUN SPORTS 1. Target shooting 2. Field sports a. Plinking b. Hunting	List general categories on chalkboard.
C. TARGET SHOOTING ON RANGES	
1. Informal 2. Formal competitions a. Slow-fire (5 minutes normally) b. Timed-fire (20 seconds) c. Rapid-fire (10 seconds)	Give example. List on chalkboard.

3. Timed and rapid-fire shooting technique
   a. Fundamentals same as slow-fire
   b. Tighter grip - prevent shifting
   c. Center hold on bullseye
   d. Importance of rhythm

Identify and discuss changes in shooting technique for timed and rapid-fire.

D. FIELD SPORTS

1. Plinking games - use imagination
   a. Safety
   b. Conduct

Give examples. Hold up visual aids and explain games.
Discuss.

2. Hunting with handguns
   a. Handguns are short range firearms
   b. Varmints
   c. Small game and upland game birds
   d. Big game

Ask students what effective range of handgun might be. Discuss.
Give brief example of handgun use for each type of hunting. List categories on chalkboard.

3. Field sports - shooting technique
   a. Use most stable position possible
   b. Two hand grip
   c. Shooting positions

Demonstrate.
Demonstrate possible shooting positions.

E. GUN LEGISLATION

Discuss.

1. Facts about firearms
   a. People make firearms dangerous
   b. Firearms have many uses
2. Current laws and attitudes about guns
3. Proposed solutions - which will work?
   a. Restricting ownership
      OR
   b. Laws addressing criminal misuse
4. Learn local firearms laws

SUMMARY (5 minutes)

F. HANDGUN SPORTS FOR EVERYONE

Repeat specific examples of sports in each major category.

1. Target shooting on ranges
   a. Formal
   b. Informal
2. Field sports
   a. Plinking
   b. Hunting

G. BE RESPONSIBLE

Discuss importance.

1. Safety
   a. Avoid horseplay with handguns
   b. Unique safety concerns for handguns
   c. Adequate ear and eye protection
2. Conduct
   a. Use common sense
   b. Set example for others

H. ASSIGNMENT - Remind students of appropriate references for next lesson

---

teacher comments:

UNIT VI LABS

Activities

A. Range Operations
B. .22 Caliber Handgun Shooting - Bench Rest
C. .22 Caliber Handgun Shooting - Other Positions
D. Timed and Rapid-fire Demonstration
E. Centerfire Handgun Shooting

(Suggested time: 4 hours)

APPROACH

Handgun shooting and coaching skills are developed during laboratories. Many additional hours of practice are required to become proficient in handgun shooting. Concentrate on fundamentals during these sessions. Use coach-pupil pairs, and allow students to control range activities whenever possible. Assistant instructors will be needed for range exercises.

Indoor or outdoor ranges can be used for suggested activities. Use both types of ranges if possible. Procedures outlined for laboratories are easily modified to meet the needs of most programs.

FACILITIES and EQUIPMENT

SHOOTING AREA

Handgun ranges available in your area can normally be located by contacting the following sources:

- Law enforcement agencies
- Wildlife agencies
- Military and ROTC units
- Sporting goods dealers
- Gun clubs

Try to locate ranges which are easily accessible. Many organizations have policies allowing use of facilities at no cost for training courses.

HANDGUNS and AMMUNITION

If all suggested activities are used, instructors will need the following handguns with appropriate ammunition and accessories:

- ☐ .22 caliber handguns
- ☐ Large caliber handguns

One handgun for each two or three students is ideal. Contact gun clubs, businesses, military units and firearms manufacturers as possible sources of handguns. Instructors should check local handgun laws.

Buying commercial ammunition in bulk is generally cheaper than asking students to buy ammunition separately. Centerfire cartridges can be reloaded to reduce costs.

TARGETS

Select target(s) according to the range(s) used. Students will shoot at blank and slow-fire targets under most circumstances. Timed or rapid-fire targets are necessary for demonstration (Activity D).

OTHER EQUIPMENT

- ☐ Ear protection for each student
- ☐ Shooting glasses for each student
- ☐ Tape or stapler
- ☐ Dummy ammunition for ball and dummy exercises
- ☐ Benches and sandbags (Activity B)

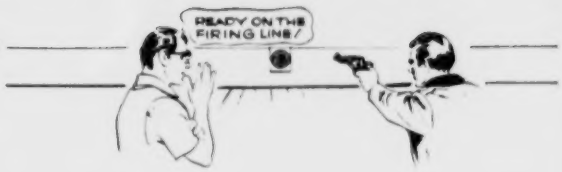
ASSISTANT INSTRUCTOR(S)

Range safety practices and discipline are extremely important. One experienced assistant for every four to six students is recommended.

ACTIVITIES

A. RANGE OPERATION (½ hour)

1. Range tour - Instructor classes should learn about range facilities. Evaluate range design.
2. Discuss range commands, safety rules and conduct. Identify unwritten rules of the range such as:
   a. Keep quiet - respect other shooters
   b. Have equipment ready
   c. Keep your firing point clean
   d. Don't give unsolicited advice
   e. Others - provided by instructor



B. .22 CALIBER HANDGUN SHOOTING - BENCH REST (1 hour) **ref. E**

1. Shooting position - Review operation of handguns available to students. Demonstrate bench rest position. Students can concentrate on grip, sighting and trigger squeeze in this steady position.
2. Shooting and coaching tips - Discuss common shooting errors that occur, including:
   a. Improper grip - changing grip
   b. Improper trigger finger position
   c. Failure to focus on front sight (looking at target)
   d. Trigger jerk - flinching
   e. Anticipating shots
   f. Failure to concentrate
   g. Hurrying shots
3. Dry firing - Using relay system, have each student practice shooting technique by dry firing. Coaches watch for errors and suggest corrections. Use blank targets and have shooters aim at center of target.
4. Loading - Demonstrate proper loading procedures for revolvers and pistols.
5. Firing - Relays slow-fire a set number of rounds before rotating. Students practice calling shots and obtaining a "tight group." Use blank targets at close range until proper technique is developed.

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teaching tips (instructor classes)

* Do not change position until student has success with bench rest shooting.
* Use blank targets for beginners.
* Start shooting at close range. Move targets back as proficiency increases.
* Safety and discipline are extremely important. An experienced instructor can supervise four to six students.

C. .22 CALIBER HANDGUN SHOOTING - OTHER POSITIONS (2½ hours) **ref. E**

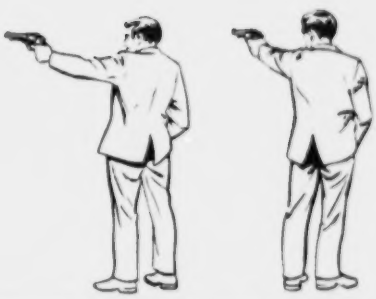
1. Shooting Position - Demonstrate shooting position (selected by instructor).
2. Shooting and coaching tips - Discuss common shooting errors that occur, including:
   a.-g. See Activity B.2.
   h. Lack of follow through

i. Position checklist
- ☐ Body orientation
- ☐ Feet
- ☐ Legs and knees
- ☐ Trigger arm-shoulder, elbow, wrist and hand
- ☐ Trailing arm
- ☐ Head

3. Dry firing - Using relay system, have each student practice slow-fire shooting technique. Coaches watch for errors and suggest corrections. Start with blank targets, or use one of the following targets:

   Indoors - 50 feet timed and rapid-fire target at 25 feet

   Outdoors - 25 yard timed and rapid-fire target at 25 yards
4. Loading - Demonstrate proper loading procedures for revolvers and pistols.
5. Ball and dummy exercise - This activity is used to detect flinching. Coaches load a live or dummy round while students are not looking. When the firing pin falls on an empty round, the shooter's reaction is observed to check for flinching. Each relay should slow-fire at least 10 rounds using this procedure.
6. Firing - Relays slow-fire a set number of rounds before rotating. Students practice calling shots and obtaining "tight groups." As shooting proficiency increases, instructors may change the type of target and/or shooting distance.



D. TIMED AND RAPID-FIRE DEMONSTRATION (optional)

1. Review rules and shooting technique for timed and rapid-fire.
2. Demonstrate timed and rapid-fire shooting using assistant instructor(s) or students.

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teaching tips (instructor classes)

* Develop slow-fire proficiency before shooting timed and rapid-fire

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E. CENTERFIRE HANDGUN SHOOTING (optional), recommended for hunter education

NOTE: Make sure that range facilities are suitable for large caliber handgun shooting. Instructors should control the type of ammunition. Insure that ear protection is adequate.

1. Shooting demonstration - Demonstrate operation of handguns available to students. Demonstrate shooting positions (selected by instructor) and fire several rounds. Positions for hunting should be emphasized if students are interested in hunting with handguns.
2. Discuss caliber restrictions for hunting if appropriate.
3. Dry firing - Each relay dry fires in the position selected.
4. Firing - Relays slow-fire a set number of rounds before rotating. Coaches should perform ball and dummy exercise to detect flinching. Shooters practice calling shots and obtaining "tight groups."

References and notes

appendices

E. *Shooting Positions Checklists*

UNIT VII
Shotguns

UNIT VII
Shotguns

(Suggested time: 10 hours)

purpose

This unit gives students a basic understanding of shotgun shooting and shotgun sports. Classroom sessions are combined with six hours of laboratories to develop shooting and coaching skills. Students participate in teaching exercises which are useful when training new shooters.

objectives—students will be able to:

1. Understand and demonstrate safe handling of shotguns.
2. Understand and apply fundamentals of basic shotgun marksmanship.
3. Demonstrate and shoot using proper stance and shooting technique.
4. Describe common uses for shotguns and general categories of shotgun sports.
5. Describe fundamentals of trap and skeet shooting.
6. Understand and recognize the need for proper conduct on ranges.
7. Understand basic shotgun range development and operations.
8. Understand and demonstrate techniques and exercises used in shotgun training.
9. Help shooters detect errors and suggest corrections.

evaluation of students

Students should take a written test covering basic shotgun marksmanship.

Observations of student performance in laboratories should give instructors ample opportunities to evaluate shooting and coaching skills. An oral examination covering basic marksmanship and coaching skills is recommended for instructor training courses.

Lessons

16. Shotgun Fundamentals and Stance
17. Shotgun Shooting Techniques
18. Trapshooting and Range Safety
19. Skeet Shooting and Range Etiquette

Labs/Activities

A. Range Operation
B. Get To The Point
C. Patterning
D. Shotgun Shooting
E. Slug or Buckshot Shooting
F. Shotgun Sports

Instructor References

Appendices: **E**

Student Texts

UNIT VII
LESSON 16
SHOTGUN FUNDAMENTALS AND STANCE

references for instructors

Appendices: **E**

references for students

teaching aids

- ☐ 16 mm projector
- ☐ Screen or video monitor
- ☐ Chalkboard
- ☐ Three patterning targets shot at 5, 20 and 40 yards with same ammunition
- ☐ One 2 3/4-inch and one 3-inch shot shell
- ☐ Damascus barrell
- ☐ Shotgun actions (at least one shotgun) Single shot, side-by-side, over and under, pump, semi-automatic, bolt
- ☐ One rifle (any type)
- ☐ One clay bird
- ☐ Assistant instructor (optional)

content outline	teaching methods
INTRODUCTION (15 minutes)	
A. FILM - Show film about hunting or competition with shotguns	Introduce film. Have students note how shotguns are used.
B. USES OF SHOTGUNS 1. Moving targets - close range 2. As rifles - rifled slugs 3. Shotgun sports a. Hunting b. Clay bird sports	Ask students to identify uses of shotguns. List on chalkboard.
LESSON DEVELOPMENT (25–30 minutes)	
C. SHOTGUN SAFETY 1. Ten commandments apply	Discuss.

2. Special considerations
   a. Swinging muzzle on moving targets
   b. Pattern expansion
   c. Chamber - shell length relationship — Review. Pass examples around class.
   d. Damascus barrels — Review. Show Damascus barrel.

D. REVIEW OF SHOTGUN FACTS — Briefly review using firearms and/or flipcharts. Ask questions.

1. Actions and types of triggers
2. Gauges
3. Chokes - pattern — Compare patterning targets.
4. Comparison of shotguns and rifles — Compare actual objects. List differences on chalkboard.
   a. Bore
   b. Barrel thickness
   c. Sights

E. SHOTGUN STANCE **ref. E**

1. Shooting technique different than rifle — Hold up clay bird. Flight speed at trap is 80 ft./sec.
2. "Boxer's" stance — Demonstrate proper stance starting with feet and working upward.
   a. Relaxed and balanced
   b. Feet approximately shoulder width apart and pointed where target will be shot
   c. Knee of leading leg slightly bent
   d. Lean forward slightly
   e. Head erect

F. SHOULDERING (MOUNTING) THE SHOTGUN **ref. E** — Demonstrate proper mounting and swinging in "slow motion."

1. Gun is extension of upper body
2. Relaxed and coordinated movement
3. Trigger arm out at nearly 90° angle
4. Trigger hand with firm grip
5. Supporting arm in natural position
6. Supporting hand midway on forearm and relaxed
7. Bring stock to cheek, then back to "pocket" of shoulder

---

teaching tips (5 minutes)

G. START WITH THE BASICS — Discuss.

1. Experience of student varies
2. Fundamentals key to shooting success

H. DEMONSTRATIONS — Critique demonstrations used in class.

1. Rifles can be used for shotgun basics - put tape over sights
2. Value of assistant as demonstrator

SUMMARY (5 minutes)

I. STANCE AND SHOULDERING **ref. E**

F - Fit
A - and
S - Stance and Shouldering
T - Technique of shooting

Repeat importance. Write "FAST" anagram on chalkboard. This LESSON dealt with the "S's" and LESSON 17 elaborates on remainder of anagram.

J. ASSIGNMENT

Remind students of appropriate references for next lesson

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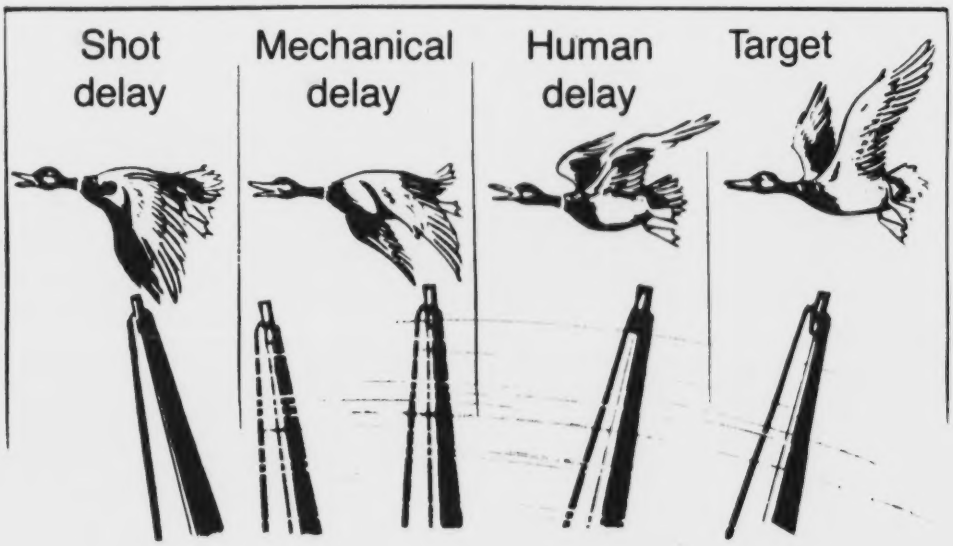
teacher comments:

UNIT VII
LESSON 17

SHOTGUN SHOOTING TECHNIQUES



references for instructors

references for students

teaching aids

- ☐ Two lightweight plastic balls - one approximately 6-inch diameter and one 2-inch diameter
- ☐ Two shotguns
- ☐ Two flashlights - tape one flashlight to shotgun barrel so that beam hits where gun is pointed and put colored cellophane over other light
- ☐ One dummy shot shell
- ☐ Chalkboard
- ☐ Assistant instructor (optional)

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. SHOTGUN SHOOTING 1. Time factor - must react quickly 2. Pointing - cannot "aim" the ball 3. Lead - throwing at a point in space	Have one student stand at back of classroom and "lob" the small ball towards front of room. A second student throws larger ball and tries to hit small ball in air. List considerations on chalkboard.
LESSON DEVELOPMENT (35–40 minutes)	
B. TIME FACTOR 1. Relaxation - fluid movements 2. Coordination	Discuss.

C. POINTING VERSUS AIMING

Discuss. List differences on chalkboard.
Demonstrate head position for pointing and aiming.

1. Both methods can be successful
2. Pointing
   a. Both eyes open - master eye
   b. Shotgun as extension of body
   c. Concentrate on target
3. Aiming
   a. One eye open
   b. Looking along barrel
4. *Pointing* recommended for beginners

D. SHOTGUN FIT

Discuss.

1. Factors in fit - common stock measurements

Show measurements using shotgun, flipchart

2. Importance of fit
3. Improper fit
   a. Comb too high, low or thick
   b. Stock too long or short

Discuss results of improper fit.

E. SHOOTING TECHNIQUES

1. Lead factors
   a. Target, human, mechanical, shot travel
   b. Follow through - KEY factor

Refer to demonstration at beginning of class.
Relate lead factors.

2. Swing through technique
   a. Simple
   b. Best technique for beginners
3. Sustained lead (pointing out)
4. Snap shooting

Demonstrate all three techniques and discuss.
All techniques can be shown using beams of two flashlights. Colored beam is target, the other is gun barrel. Have assistant or student help.

F. TRIGGER "SLAP"

Demonstrate proper and improper trigger control.

G. RECOIL AND FLINCHING

Discuss the physics of recoil and how to minimize effects.

1. Recoil unavoidable
2. Minimizing recoil
3. Causes of flinching
4. Detecting flinch - ball and dummy

Hold up "dummy" round. Explain exercise.

---

teaching tips (5 minutes)

H. SHOTGUNS FOR BEGINNERS

Discuss.

1. 12 gauge recommended
   a. More chance for success
   b. Use target loads
2. Smaller gauges
   a. Beginners who are small in stature
   b. Move closer to target, use "open" choke

SUMMARY (5 minutes)

I. SUCCESSFUL SHOTGUNNING
F - Fit
A - and
S - Stance and Shouldering
T - Technique of shooting

List FAST anagram as good way to remember basics of shotgun shooting.

J. ASSIGNMENT

1. Remind students of appropriate references for next lesson
2. Have students prepare a list of differences between trap and skeet shooting. Their lists will be used to compare these sports in LESSON 18.

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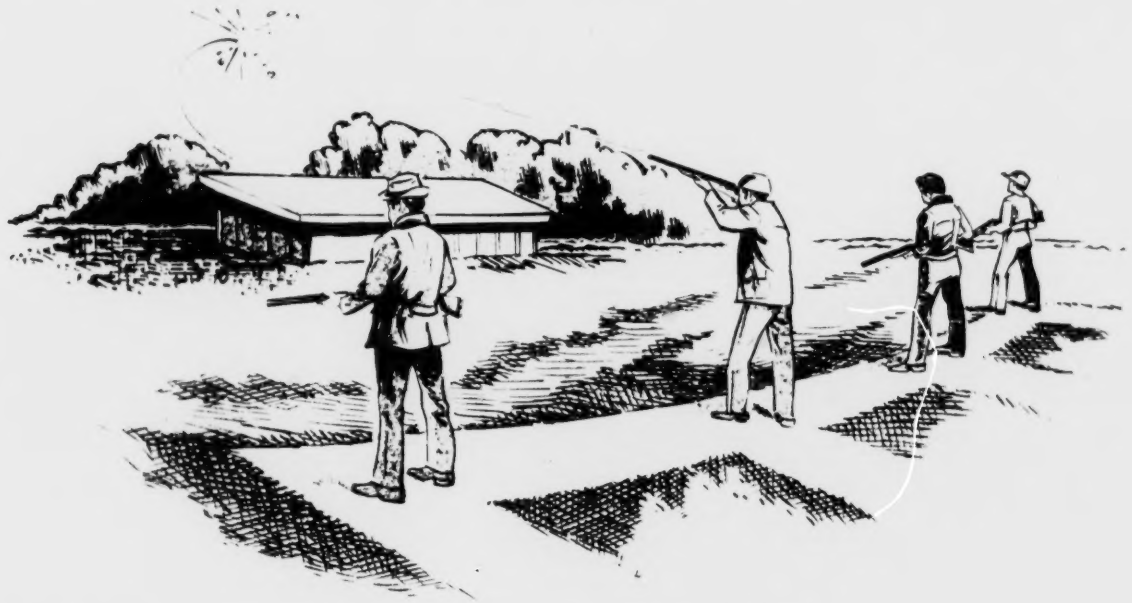
teacher comments:

UNIT VII
LESSON 18
TRAPSHOOTING AND RANGE SAFETY



references for instructors

references for students

teaching aids

- ☐ Film
- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ One clay bird
- ☐ One pair of ear plugs and/or protectors
- ☐ One pair of safety glasses
- ☐ Chalkboard

content outline	teaching methods
INTRODUCTION (4 minutes)	
A. DEVELOPMENT OF CLAY TARGETS 1. Live birds were used first 2. Glass balls filled with feathers 3. Clay birds a. Dimensions b. Flight speed	Show clay target. Discuss history of clay bird. Announce that each student will have opportunity to hit clay birds.
LESSON DEVELOPMENT (40 minutes)	
B. WHY SHOTGUN SPORTS? 1. Simple to complex activities 2. Inexpensive when compared to many other sports	Discuss. List reasons on chalkboard.

3. Year-round activity
4. Maintain shooting skills

C. SHOTGUN GAMES

1. Informal — Give examples of activities.
2. Trap and skeet comparison — Draw sketches of trap and skeet ranges on chalkboard. Ask students to identify differences using lists they prepared (see LESSON 17, J.2.). List differences on chalkboard.
   a. Range facility differences
   b. Target flight and shooting distance
   c. Type of shotgun, barrel length and choke
   d. Procedures for one "round" of trap and skeet
   e. Others - as desired

D. Film or Video on Trap Shooting — Introduce film. Answer questions and discuss major points at end of film.

E. RANGE SAFETY — Discuss.

1. Ten commandments apply
2. Special rules — Ask students to identify safety procedures seen in film. List rules on chalkboard.
   a. Don't load until your turn to shoot
   b. Gun unloaded at all other times - action open
   c. Delays - unload gun
   d. Misfires - keep gun pointed down range
   e. Make sure trap boy is safely in trap house (red flag)
   f. Use appropriate shot sizes
   g. Obey range commands
3. Ear protection — Show example. Stress importance.
4. Safety glasses — Show example. Stress importance.

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teaching tips (3 minutes)

F. NOVICES ON TRAP RANGE — Ask for student opinions on where novice should start.

1. Close to trap house with open choke shotgun
2. "Straight away" targets — Discuss.

SUMMARY (3 minutes)

G. SUCCESSFUL TRAPSHOOTING — Repeat these points brought out in film and discussion.

1. Correct shotgun fit
2. Practice fundamentals of shooting
3. Concentrate

H. ASSIGNMENT
Remind students of appropriate references for next lesson

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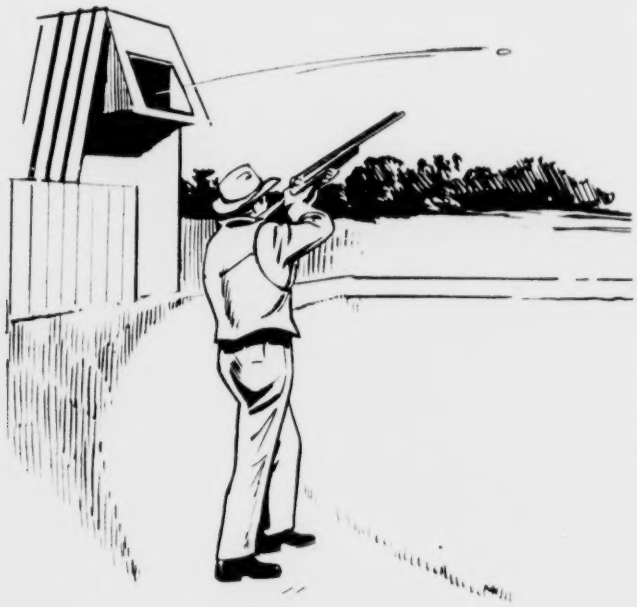
teacher comments:

SKEET SHOOTING AND RANGE ETIQUETTE



references for instructors

references for students

teaching aids

- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ Chalkboard
- ☐ One shotgun slug and/or buckshot

content outline	teaching methods
INTRODUCTION (23 minutes)	
A. Film or Video on Skeet Shooting	Introduce film. Answer questions and discuss major points at end of film.
LESSON DEVELOPMENT (20 minutes)	
B. RANGE ETIQUETTE - TRAP OR SKEET 1. Safety - #1 ethic 2. Call "pull" loudly for target 3. Keep quiet 4. Be ready for your turn 5. Move quickly between stations 6. Don't second guess shots 7. Don't give unsolicited advice 8. Others - provided by instructor	Discuss. Ask students to describe proper conduct on trap or skeet ranges based on activities shown in movies and personal experience. List on chalkboard.
C. HUNTING WITH SHOTGUNS 1. Shotgunning a. Gun selection b. Selecting ammunition and shot size	Discuss. Briefly discuss. Contrast bobwhite hunting with pass shooting for waterfowl as example.

2. Shotgun used as rifle
   a. Slugs or buckshot
   b. Range and accuracy
   c. Use rifle marksmanship fundamentals
   d. Sights

Pass example(s) around class.

---

teaching tips (2 minutes)

D. NOVICES ON SKEET RANGE
   1. Start at position 7 with open choke shotgun
   2. Use low house bird for "straight away" targets

Ask for student opinions on where novice should start. Discuss.

SUMMARY (5 minutes)

E. SHOTGUNS FOR ALL PURPOSES
   1. Informal "games"
   2. Trap and skeet shooting
   3. Hunting
      a. Shotgunning
      b. Used like rifle

Review general categories of shotgun sports.

F. BE RESPONSIBLE
   1. Safety
   2. Conduct

Discuss.

G. ASSIGNMENT
   Remind students of appropriate references for next lesson

H. OPTIONAL PROJECT - Have students investigate shotgun sports. Each student should give a brief description of a sport during a laboratory period. Instructors will need to provide references in some cases. The following sports are suggested:
   a. International Clay Pigeon
   b. International Skeet
   c. Hand trap games
   d. Rabbin run
   e. Grouse walk, quail walk
   f. Trap (doubles and handicap)
   g. Protection
   h. 410 mini-trap
   i. Riverside Skeet
   j. Crazy Quail
   k. Still board (Shotgun "Luck" Match)
   l. Turkey shoot
   m. League shooting
   n. Sporting clays
   o. Others - as needed

teacher comments:

UNIT VII LABS

Activities

A. Range Operation
B. Get To The Point
C. Patterning
D. Shotgun Shooting
E. Slug or Buckshot Shooting
F. Shotgun Sports

(Suggested time: 6 hours)

APPROACH

Shotgun laboratories allow students to develop shooting skills and observe teaching techniques. Use coach-pupil pairs and the relay system for these exercises. Students should control range activities whenever possible. Assistant instructors may be needed for large classes.

Design of laboratories is left to instructors. This section contains suggested activities which can be modified to meet specific goals.

FACILITIES and EQUIPMENT

SHOOTING AREA

Open area at least 300 yards long and 100 yards wide. Be sure you have permission and notify proper authorities. Width of the area will determine angles for target throwing.

Use one or more portable traps to throw clay birds. Hand held traps are not recommended because of great variability in target flight.

OR

Established trap or skeet range. Ranges in your area can normally be located by contacting the following sources:

- Gun clubs
- Sporting goods dealers
- Wildlife agencies
- Law enforcement agencies
- Military and ROTC units

Many organizations have policies allowing use of facilities at no cost for training courses.

SHOTGUNS

Since beginners start shooting at short distances, one or more *open choke* shotguns are required. Most students can use a 12 gauge; however, a 20 gauge may be desirable for novices of small stature. A variety of actions and chokes is recommended for patterning exercises and general training. Instructors should contact gun clubs, businesses, wildlife agencies and firearms manufacturers as possible sources of shotguns.

One shotgun with sights is required if instructors use Activity E.

AMMUNITION

If all suggested activities are used, instructors will need the following ammunition:

- ☐ Dummy shot shells
- ☐ Target loads (7½, 8 or 9 shot)
- ☐ Slugs or buckshot rounds

Shot shells can be reloaded to reduce costs. If factory ammunition is purchased, bulk orders are generally cheaper than asking students to provide their own ammunition.

TARGETS

Clay targets are used in most activities. Plastic birds can be used for dry firing exercises if desired.

OTHER EQUIPMENT

- ☐ Ear protection for each student
- ☐ Shooting glasses for each student
- ☐ Tape or stapler
- ☐ Large sheets of paper for patterning targets
- ☐ Sheets of cardboard to support patterning targets (or target frames)
- ☐ String for drawing 30-inch circle
- ☐ Magic markers
- ☐ Shooting vests (optional)

ASSISTANT INSTRUCTOR(S)

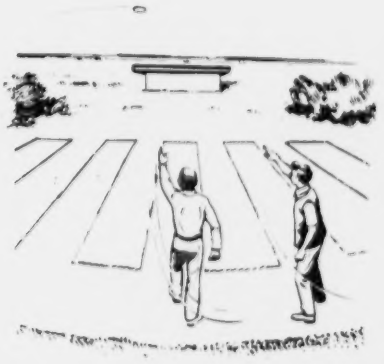
Experienced instructors can supervise six pairs of students according to the NRA. The number of assistants will determine how many students can shoot at one time.

ACTIVITIES

A. RANGE OPERATION (½ hour)

1. Range tour - Instructor classes should learn about ranges. Tour facilities and ask range operator to explain the following:
   a. Safety considerations
   b. Direction of range (facing north-northeast ideal)
   c. Shot "drop area"
   d. Noise considerations
   e. Trap house operations (loading, safety)
   f. Control of shooters
   g. Scoring

   If range is not available, instructors can discuss points a. through g. using the shooting area and manual traps.
2. Discuss range commands, safety and conduct on shotgun ranges. Review range safety and etiquette covered in LESSONS 18 and 19.



B. GET TO THE POINT (½ hour) **ref. E**

1. Pointing - Have all students stand in one line facing the instructor. The instructor quickly holds up a clay bird. Students point index fingers of their supporting hands (left hand for right-handed shooter) at the clay bird and say "bang" when their points are correct. Have students note the following:
   a. Stance
   b. Pointing was done with both eyes open
   c. Shotgun barrel is extension of the finger
2. Mounting (shouldering) the shotgun - Using the coach-pupil system, have each relay practice these exercises. Pupils hold gun butts to their shoulders using trigger hands only, raise muzzles almost straight up and look down barrels. Instructors and coaches insure that eye position is correct and gun butt is placed in "pocket" of shoulder.

Relays practice shouldering shotguns and swinging movements. Coaches watch for the following:

a. Bringing stock to cheek (not vice versa)
b. Proper stance
c. Body swing - head should stay in the same position on stock during a swing

---

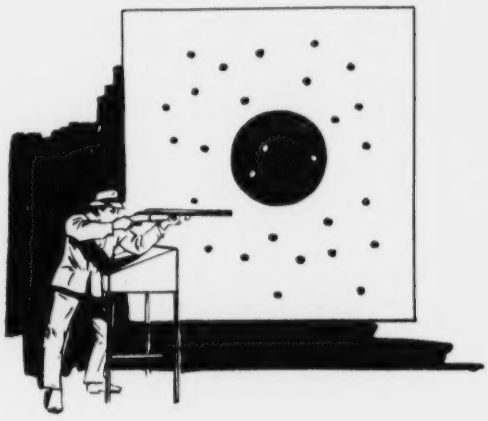
teaching tips (instructor classes)

* GET TO THE POINT exercises are important with novice shooters
* Emphasize importance of proper shooting fundamentals, practice and rhythm

---

C. PATTERNING (1 hour)

1. Firing - Patterning targets are normally placed at 40 yards. Have coaches get shotguns and one round of ammunition for each pupil. Pupils load and fire one round at patterning targets. All shotguns should be cleared and pupils retrieve their targets. Coaches and pupils switch positions and repeat.
2. Evaluation of patterns - After all students have finished firing, instructors demonstrate pattern evaluation. Draw a 30 inch circle around the area of greatest shot concentration and count holes inside the circle. Compute percent of shot inside the circle and determine total number of pellets in the shot shell used. Have students evaluate their patterns on the range or at home. Instructors can check student targets and point out the following:
   a. Holes or gaps in patterns
   b. Patterns vary when guns and ammunition are interchanged
   c. For proper pattern evaluation, five or more rounds are fired to obtain an average



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teaching tips (instructor classes)

* Use a variety of chokes and ammunition for patterning exercises (if available)

D. SHOTGUN SHOOTING (4 hours minimum)
ref. E

1. Demonstrate operation of shotguns available to students. Discuss common shooting errors that coaches may observe, including:
   a. Failure to follow through
   b. Lifting cheek off of stock as gun is fired
   c. Aiming the shotgun
   d. Improper seating of gun in pocket of shoulder
   e. Tenseness (check grip)

f. Failure to concentrate
g. Elements of proper stance
   - ☐ Feet spread and pointed properly
   - ☐ Knees - leading knee slightly bent
   - ☐ Body balance shifted slightly forward
   - ☐ Trigger arm, hand and finger
   - ☐ Supporting arm and hand
   - ☐ Head position

2. Dry firing - Each relay should dry fire at moving targets. If shotguns are in short supply, students can point with their index fingers. Coaches watch for errors and suggest corrections.

   Instructors can use any of the following traps to give novices a "straightaway" target:

   a. Portable trap
   b. Trap range with trap set straight and shooters directly behind trap house
   c. Skeet range with shooters at position 7 and targets thrown from low house

3. The first shots - Procedure for this exercise is similar to Activity D.2. However, one shooter will fire at each target while other students dry fire. Open choke shotguns are a must for this session.
4. Ball and dummy - Coaches detect flinching by loading live or dummy rounds while pupils are not looking. When the hammer falls on a dummy round, the shooter's reaction can be observed. Shooters learn if they are flinching and problems can be corrected.
5. Advanced shooting - Shooting skills develop at different rates for each student. Make sure *all* students are practicing sound shooting fundamentals. Possible exercises include:

   a. Portable traps - angles, singles
   b. Trap range - partial or full round
   c. Skeet range - partial or full round
   d. NRA Qualifications Program
   e. Competitions

   Don't advance too quickly. Success is important to new shooters. A variety of activities may be used to accommodate shooters with varying skill levels.

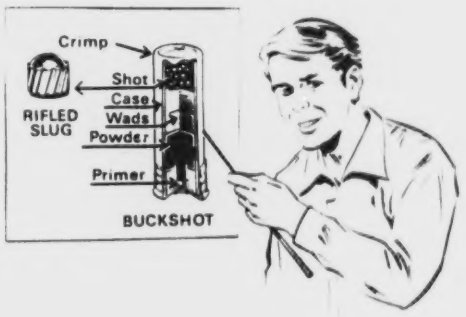
---

teaching tips (instructor classes)

* Stress safety at all times.
* Experienced instructors can supervise six pairs of students. Inexperienced instructors can handle two pairs (NRA guidelines).
* Group students by size to obtain best fit with shotguns available.
* Instructors should stand behind students to detect most errors.
* Breaking the first target is the hardest part. After initial success, the student's confidence builds.
* Do not emphasize hits or misses. Concentrate on shooting fundamentals.
* Don't advance too quickly. Students develop skills at different rates.

E. SLUG OR BUCKSHOT SHOOTING (optional)

1. Recommended for hunter education in areas that use shotguns for big game.
2. Use shotgun as a rifle. This activity requires a rifle range or good backstop.
3. Demonstrate operation of shotgun(s) available to students. Each student shoots one or more rounds from approximately 50 to 75 yards using a shotgun with sights.



F. SHOTGUN SPORTS (optional)

If instructors use the assignment in LESSON 19, Part H., the SHOTGUN SPORTS session is used for brief student reports on shotgun sports. Any time remaining can be used to discuss hunting or other topics.

BEST COPY AVAILABLE

References and notes

appendices

E. Shooting Positions Checklists

UNIT VII

REFERENCES

UNIT VIII

Shooting sports programs

SHOOTING
MANUAL

UNIT VIII

Shooting sports programs

(Suggested time: 3 hours)

purpose

Students learn about shooting sports program development, existing programs and shooting organizations. Every instructor training course should include these subjects so that potential instructors are aware of the many options available. Panel discussions are used to give students experience in team teaching and speaking in front of an audience.

objectives—students will be able to:

1. Give examples of shooting sports organizations and programs they offer.
2. Identify and describe basic goals and functions of the National Shooting Sports Foundation and National Rifle Association.
3. Identify potential sources of help in organizing shooting programs.
4. Discuss types of aid available for shooting program development.
5. Understand and discuss basic considerations for organizing shooting programs.
6. Describe general types of training and shooting programs offered by the National Rifle Association.
7. Discuss organization and administration of National Rifle Association training courses.
8. Give examples of hunter education programs.
9. Give examples of rifle, handgun and shotgun shooting games.
10. Work as a team to organize and present panel discussions.
11. Orally present information on assigned topics.

evaluation of students

Evaluate panel discussions from two standpoints. First, did the panel members successfully plan and organize their presentation as a team? Second, evaluate each student's presentation.

Instructors may wish to give a written or oral test concerning shooting programs. Students should be allowed to use their notes and references when answering test questions. Knowing where to find information about shooting programs is more important than memorizing specific subjects.

Labs/Activities

(Panel discussions)

A. Organizing Shooting Programs
B. NRA Programs
C. Selected Organizations and Programs

Instructor References

Student texts

UNIT VIII LABS

APPROACH

Students present panel discussions during laboratories. Divide the class into groups and assign topics which are important in your course. Have each group read available materials, gather information and design their own plan for discussing subjects within established time limits. Allow students as much freedom as possible in preparing for panel discussions.

Most training courses require team teaching. Panel discussions allow students to practice as a team. In addition, each student develops speaking skills.

An outline of topics is provided under suggested activities. Instructors may choose to expand some subjects and omit others. These sessions can be held during three lecture periods or as a block of laboratories.

Activities

(Panel discussions)

A. Organizing Shooting Programs
B. NRA Programs
C. Selected Organizations and Programs

(Suggested time: 3 hours)

FACILITIES and EQUIPMENT

TRAINING AREA

Classroom with panel members seated together facing the audience.

AUDIO-VISUAL EQUIPMENT

Students may want to use a chalkboard, overhead projector or other equipment. Advise students about existing visual aids which may be helpful in discussing their topics.

ACTIVITIES

NOTE: Specific topics and time limits are determined by instructors. The following categories are used in instructor training courses at Colorado State University. Many other organizations and programs exist.

A. ORGANIZING SHOOTING PROGRAMS (1 hour)

1. Organizations
   a. National Shooting Sports Foundation
   b. National Rifle Association
2. Sources of help
   a. Director of Civilian Marksmanship
   b. Firearm manufacturers - example
   c. Wildlife agencies
   d. Military and ROTC units
   e. Sporting goods dealers
   f. Gun clubs

g. Law enforcement agencies
h. Other agencies and organizations

3. Program development
   a. Selling the program
   b. Costs of shooting programs
   c. Organizing gun clubs - considerations

B. NRA PROGRAMS (1 hour)

1. Club affiliation with NRA
2. NRA training programs
   a. Air guns
   b. Rifle
   c. Handgun
   d. Shotgun
   e. Home Firearms Responsibility
   f. Hunter Safety and Conservation
   g. Instructor training
   h. Junior programs
3. Training course organization and administration
4. Competitions and awards
   a. Qualification programs
   b. Leagues
   c. Postal matches
   d. Tournaments
   e. Silhouette courses

C. SELECTED ORGANIZATIONS AND PROGRAMS (1 hour)

1. Hunter Education Programs - several examples
2. Amateur Trapshooting Association - Youth Trapshooting Program
3. National Skeet Shooting Association
4. Presidential Awards Program
5. Shooting Games
   a. Rifle
   b. Handgun
   c. Shotgun
6. Local organizations and programs - selected by instructor
   a. Sportsman's and shooting clubs
   b. Community recreation programs
   c. Service organizations (Jaycees, VFW, etc.)
   d. Boy Scouts and Girl Scouts
   e. 4-H Shooting Sports Programs

References and notes

REFERENCES

UNIT IX
Field safety

UNIT IX

Field safety

(Suggested time: 2 hours)

purpose

UNIT IX discusses specific considerations of field safety. Students learn about safe gun handling by observing simulated field situations and participating in exercises. The field test recommended for evaluation allows students to apply their knowledge under field conditions.

objectives — students will be able to:

1. Understand and recognize the need for safe gun handling in the car and field.
2. Demonstrate safe methods for transporting firearms and removing guns from a vehicle.
3. Demonstrate safe handling of firearms when field obstacles exist.
4. Demonstrate safe gun carrying positions.
5. Describe and demonstrate safe zones of fire.
6. Recognize the need for using common sense and restraint while hunting.
7. Recognize the need to wear blaze orange in some hunting situations.
8. Understand that hunters often make "split-second" decisions while hunting.
9. Understand that hunting is a safe sport when compared to other sports.
10. Describe and demonstrate teaching techniques useful in field safety training.

evaluation of students

Students should take a written test concerning field safety. Incorporate these questions into a comprehensive test on hunting which can be given after completing UNIT X and XI.

All students should successfully complete a field test. Instructors can evaluate each student's safety practices and attitudes towards safety. The test does not have to be elaborate and instructors can improvise to fit their needs. For example, "frisbees" can be used as targets if pop-up targets are not available.

Lessons

20. Car and Field Safety
21. Handling Guns in the Field

Instructor References

Student Texts

UNIT IX
LESSON 20
CAR AND FIELD SAFETY

references for instructors

references for students

teaching aids

- ☐ Classroom large enough to complete demonstrations
- ☐ Film
- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ Chalkboard
- ☐ One rifle or shotgun in a case
- ☐ Six chairs set up to simulate the seats and trunk of car
- ☐ Two rifles or shotguns for demonstrations (brooms can be used to simulate firearms)
- ☐ Two chairs with string or rope strung between them to simulate a fence.

content outline	teaching methods
INTRODUCTION (10 minutes)	
A. TEN COMMANDMENTS OF GUN SAFETY 1. Common sense 2. Requires restraint	Have students list their own ten commandments. Ask students for their commandments and list responses on chalkboard.
LESSON DEVELOPMENT (38 minutes)	
B. Film or Video - Hunter Education Topic 1. Do it right - professional 2. Self-control	Introduce film. Answer questions and discuss major points at end of film.
C. FIREARMS IN VEHICLES 1. Many accidents occur around vehicles 2. Transporting firearms a. Unloaded, cased and separate from ammunition b. State laws vary	Discuss. Use simulation of car. Demonstrate proper storage using cased firearms.

3. Removing firearms from vehicle

Ask for "volunteers" to demonstrate safe removal. Use "mock" vehicle.

4. Unload and secure unattended firearms

D. FIELD OBSTACLES

1. Crossing obstacles (fences, ditches, windfalls, gullies)
   a. Unloaded with action open
   b. Direction of muzzle
   c. Finger off trigger
   d. Check barrel for obstructions

Ask for "volunteers" to demonstrate safe crossing of fence when alone or without others. Advise students that same rules apply for any obstacle.

2. Unstable footing (snow, ice, mud, steep banks)
   a. Same rules as D. 1.
   b. Be sure to check for barrel obstructions after a fall

Ask students what safety rules apply. Repeat rules.

E. WHEN NOT HUNTING - UNLOAD FIREARM

Briefly discuss.

1. Taking a break
2. Cleaning bagged game
3. Putting bagged game in hunting coat

SUMMARY (2 minutes)

F. ASSIGNMENT - Advise students that they will be taking a field safety test on shooting situations during LESSON 21. Have students review gun handling. Remind students of appropriate references for next lesson.

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teacher comments:

UNIT IX
LESSON 21

HANDLING GUNS IN THE FIELD

references for instructors

references for students

teaching aids

- ☐ Film - Shoot/Don't Shoot and associated Instructor's Guide
- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ Chalkboard
- ☐ One rifle or shotgun in a case
- ☐ Daylight fluorescent orange best or hat

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. CARRYING POSITIONS 1. Two-handed (port arms, ready) 2. Cradle 3. Shoulder 4. Elbow (side) 5. Trail 6. Sling	Select a student to demonstrate each carrying position. Briefly discuss situations where specific positions might be used.
7. General rules - all positions a. Finger outside trigger guard b. Safety on c. Muzzle in safe direction	Identify.

LESSON DEVELOPMENT (35—40 minutes)

B. FILM - *SHOOT DON'T SHOOT* (23½ minutes)	Introduce film. Ask students to answer the ten shoot/don't shoot questions and observe carrying positions used in different situations.
C. DISCUSSION OF FILM	Use Instructor's Guide for film to briefly discuss each situation. Ask questions.
1. Woodchuck	
a. Ricochets	
b. Use of safety	
c. Elbow carry	Demonstrate.
2. Squirrel	
a. Backstops	
b. Gun handling	
c. Cradle carry	Demonstrate.
3. White-tailed deer	
a. Be sure of target	
b. Daylight fluorescent orange	Show example.
c. Never wear "white" or "buckskin" colors	Discuss.
4. Doves	
a. Arrange zones of fire before hunt	Draw example of zones of fire on chalkboard.
b. Know where companions are located	
c. Trail carry	Demonstrate.
5. Pronghorn	
a. Be sure of background	
b. Never shoot near buildings	
c. Sling carry	Demonstrate.
6. Ducks	
a. Zones of fire	
b. Safe handling in duck blinds	
c. Safe handling in boats	Discuss. Use flipchart showing safe gun handling.
d. Shoulder carry	Demonstrate.
7. Mule deer	
a. Be sure of background	
b. Daylight fluorescent orange	
c. Two-handed carry (port arms, ready)	Demonstrate.
8. Rabbit	
a. Hunting formation and carrying positions	
b. Use restraint	
9. Pheasant	
a. Zones of fire	
b. Hunting formation and carrying positions	
10. Pronghorn	
a. Be sure of background	
b. Lethal range of rifles	
D. ACCIDENT STATISTICS	Ask students how hunting compares with other sports for accidents. Discuss briefly.
1. Hunting is a safe sport	
2. Most "accidents" are avoidable	

teaching tips (5 minutes)

E. "FIELD COURSES" IN THE CLASSROOM
1. Students participate - learn by doing
2. Instructors are models for safety

Discuss value of using simulated field experiences in the classroom.

F. ACCIDENT INFORMATION
1. *Uniform Hunter Casualty Report* - NRA
2. *Accident Facts* - National Safety Council
3. Conservation agencies

Discuss sources of information on hunting accidents.

SUMMARY (5 minutes)

G. FIELD SAFETY
1. Hunting is a safe sport
2. Hunting requires *RESPONSIBILITY*
   a. Hunters make "split-second" decisions
   b. Develop safe habits
   c. People must *want* to handle guns safely

Draw diamond shape on chalkboard.
Write *"RESPONSIBILITY"* and explain.

RESPONSIBILITY

H. ASSIGNMENT
Remind students of appropriate references for next lesson

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teacher comments:

References and notes

UNIT X

Hunting and wildlife conservation

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COMPUTER

UNIT X

Hunting and wildlife conservation

(Suggested time: 12 hours)

purpose

UNIT X examines hunter responsibilities and exposes students to hunting activities. Lessons and laboratories are designed to improve the knowledge, skills and behavior of students who wish to hunt. Participants must accept many obligations related to this sport since hunting is a privilege.

Non-hunters in the class will have a better understanding of sport hunting. Input from non-hunters is important in these sessions.

objectives — students will be able to:

1. Understand and describe the development of sport hunting in North America.
2. Understand that hunters have many obligations that must be accepted.
3. Understand and appreciate hunter contributions to conservation in North America.
4. Understand basic principles of wildlife habitat and population management.
5. Recognize that habitat destruction is the major threat to wildlife survival.
6. Show awareness of the role of hunting in wildlife management.
7. Understand and recognize the need to support and obey wildlife laws.
8. Compare philosophies of American and European hunting and management systems.
9. Understand how European hunters are trained and the hunter's image in European societies.

Continued on next page

Lessons

22. A Look At Hunting
23. Wildlife Conservation in America
24. Hunting in Europe
25. Wildlife Management - Habitat
26. Wildlife Management - Populations
27. Wildlife Laws

Labs/Activities

A. Survival and First Aid
B. Hunting Methods
C. Wildlife Identification
D. Game Care

Instructor References

Appendices: **F, G**

Student Texts

Appendix **G**

10. Understand the role of customs, traditions and ethics in European hunting.
11. Understand the importance of planning a hunt and insuring personal safety.
12. Propose methods for hunting game animals and describe a hunt.
13. Recognize the need to know about habitats and life histories of wildlife.
14. List survival techniques and equipment useful for hunting emergencies.
15. Identify wildlife specified by instructor.
16. Understand and describe how to insure clean kills and find downed game.
17. Describe proper care of bagged game.
18. Discuss teaching methods used in this unit which may be useful in their classes.

evaluation of students

After completing the wildlife identification laboratory, students can take an identification test. However, instructors should wait to finish UNIT XI before giving a comprehensive test about hunting. Objectives for UNITS X and XI will be helpful guidelines for determining scope and content of the test. Be sure to include principles of wildlife management, habitat ecology, population dynamics and other topics covered in this unit. The hunter safety coordinator with your state's wildlife management agency can provide information on tests required to earn hunter safety certificates. For those desiring hunter safety instructor rating, the NRA and/or state requirements must be met. Observe students during classroom and laboratory sessions. Try to evaluate each student's attitudes as the hunting unit develops. Listening to opinions and exchanging ideas are important functions in this unit.

UNIT X
LESSON 22

A LOOK AT HUNTING

references for instructors

references for students

teaching aids

- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ Chalkboard
- ☐ One modern firearm
- ☐ Example of meat bought at supermarket

content outline	teaching methods
INTRODUCTION (30 minutes)	
A. Film - Show a modern hunting film Hunting evolved in modern society from a necessity to a recreation	Ask students for pros and cons of hunting on society.
LESSON DEVELOPMENT (15 minutes)	
B. EVOLUTION OF HUNTING 1. Early man hunted to survive (food, clothing, shelter, tools) a. Man evolved as a hunter-gatherer b. Primitive implements for hunting c. Skill and teamwork required for hunting and protection d. Wildlife meant survival	Fantasize. Discuss the amount of preparation, patience and teamwork needed to hunt a mastodon with primitive implements.
2. Hunting for sport in many of today's societies a. Alternate sources of food and other necessities	Discuss sport hunting as portrayed in film. Hold up packaged meat as example.

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b. Improved technology (firearms, vehicles, etc.)
c. Skill is required
d. Wildlife a renewable resource

Hold up firearm as example.

C. HUNTER RESPONSIBILITIES

1. To wildlife and land
   a. Protect and develop habitats for all wildlife
   b. Sportsmanship and sense of "fair play"
   c. Accurate marksman - insure clean kill
   d. Identification and knowledge of hunted species
   e. Proper care of bagged game
   f. Support and obey game laws
   g. Others - as desired
2. To themselves and others
   a. Personal safety (survival, first aid)
   b. Outdoor skills and safe gun handling
   c. Conduct and courtesy to hunters and non-hunters
   d. Respect for landowner and property
   e. Others - as desired

Introduce and discuss hunter responsibilities. Ask students to identify areas of responsibility shown in film. Write answers on chalkboard.

SUMMARY (5 minutes)

D. HUNTING THROUGH THE AGES

1. Man evolved as a hunter-gatherer
2. Hunting has changed from survival to sport
3. Sport hunters have responsibilities
   a. To wildlife and land
   b. To themselves and other people

Repeat these major points. Advise students that remainder of UNITS X and XI are devoted to hunter responsibilities.

E. ASSIGNMENT

1. Remind students of appropriate references for next lesson.
2. Knowing how to prepare for a hunting trip and understanding basic survival and first aid are part of a hunter's responsibilities. Ask each student to make a checklist for hunt preparation. Lists should include survival kit and first aid materials. Instructors can select the type of hunt most appropriate for their area. Take time during laboratories to discuss this assignment. One-half hour of laboratory time is set aside specifically for this discussion.

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teacher comments:

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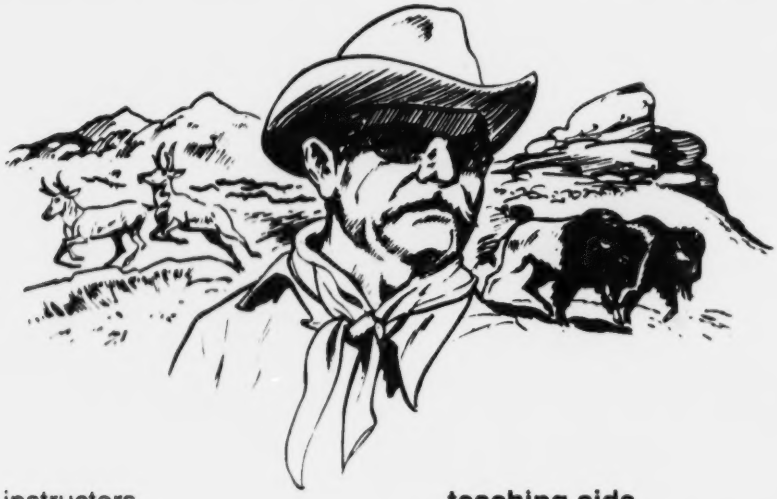
UNIT X
LESSON 23
WILDLIFE CONSERVATION IN AMERICA



references for instructors

references for students

teaching aids

NOTE: Invite a wildlife expert to talk about wildlife conservation. Instructors can provide lesson plans and references to help guests prepare. Contact universities and wildlife agencies as sources of speakers.

☐ Chalkboard

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. WHAT IS WILDLIFE CONSERVATION?	Have students write their definitions of wildlife conservation. Ask for definitions and write key words on chalkboard. Discuss.
LESSON DEVELOPMENT (40 minutes)	
B. WILDLIFE OWNERSHIP DOCTRINE 1. Ownership in Europe - wildlife belongs to landowners in many European countries 2. Ownership in America a. America is a nation of emigrants b. Magna Carta (1215) c. States own wildlife "in trust" for the people	Ask students - who owns wildlife? Briefly describe development of American ownership doctrine.
C. ERA OF ABUNDANCE (? - 1800) 1. Wildlife in unending supplies	List era on chalkboard. Describe an imaginary hunt.

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2. Hunting meant survival
   a. Kill by baiting, big guns, trapping or any means available
   b. No "sport" involved
3. Early concern for wildlife
   a. First attempts at management were harvest controls — Give examples of early laws.
   b. "Bucks only," seasons, bag limits

D. ERA OF EXPLOITATION (1800 - 1900) — List era on chalkboard. Discuss.

1. Wildlife wore a dollar sign — Describe results of a market hunt
   a. Rapid increase in human population
   b. Improved firearms
   c. Commercial hunting techniques developed — Describe techniques such as "sink boxes," punt guns, etc.
2. Westward expansion of railroads - market hunters moved west when a means for transporting meat to eastern markets was developed — Discuss.
3. The "offs" policy for all natural resources — Write "off" on chalkboard and describe common thinking of the times.
   a. Wildlife - kill *off* and move on
   b. Range - graze *off* and keep going
   c. Forests - cut *off* and move on
4. Early stirrings in the late 1800's — Give examples of people and organizations concerned about rapidly disappearing resources.
   a. First sportsmen's clubs in Chesapeake Bay area organized to exclude market hunters
   b. Boone and Crockett Club - Teddy Roosevelt
   c. George Bird Grinnell
   d. Gifford Pinchot
   e. Early concern for wildlife developed into concern for all resources

E. ERA OF PROTECTION (1900-1935) — List era on chalkboard. Discuss.

1. Wildlife protected - conservation meant protection
   a. Closed or restricted seasons
   b. Growth in numbers of "sport" hunters
2. Lacey Act of 1900 - beginning of the end for market hunting — Briefly describe.
3. Introduction of exotic wildlife became popular
   a. Successes — Give example of a success.
   b. Mistakes — Use the starling as example.
4. Roosevelt, Pinchot, Grinnell
   a. Beginning of Forest Service
   b. Wildlife refuge system
5. Migratory Bird Treaty Act of 1918 — Briefly describe.
6. Migratory Waterfowl Hunting Stamp Act of 1934 — Briefly describe.

7. Overprotection becomes a problem

F. ERA OF HABITAT AND HARVEST (1935-Present) — List era on chalkboard. Discuss.

1. Wildlife must be managed
   a. Protection isn't enough
   - Conservation means *wise use* of resources
2. Aldo Leopold - "Father of Wildlife Management"
   a. Identified habitat as key to wildlife conservation
   b. Called for trained professional managers
3. American Game Policy (1930) — Briefly discuss.
4. State hunting licenses provide revenue for management
5. Pittman-Robertson Act of 1937
   a. Federal funding for state wildlife research and management
   b. Funds provided through excise tax on sporting arms and ammunition were "earmarked" for wildlife purposes
   c. States forced to plan projects, report results and spend license revenues only on wildlife
   d. Dingell-Johnson Bill of 1950 was similar and applies to fish
   e. Dingell-Hart Bill in 1970 taxed handguns
6. Sport hunting becomes a tool of management
7. Principles developed in this era are basis for management practiced today

G. CURRENT AND FUTURE TRENDS — Discuss factors influencing current and future trends in wildlife conservation.

1. Increasing human population
   a. Wide variety of interests
   b. Increasing pressures on all resources
2. Wildlife management becoming more sophisticated
   a. More knowledge and expertise
   b. Improved technology

H. WILDLIFE CONSERVATION TODAY

1. A social process including all the activities for defining and attaining wise use of wild animals and their habitats — Refer to students' definitions at beginning of class. Propose this definition and write on chalkboard. Discuss.
2. Society defines conservation goals (wise use)
3. Wildlife conservation goals change as society changes

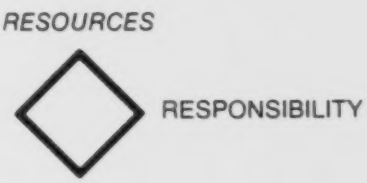
SUMMARY (5 minutes)

I. A LOOK BACK

1. Era of abundance
   a. Hunting meant *survival*
   b. Wildlife *abundant*
2. Era of exploitation
   a. Hunting was *commercial*
   b. *Exploitation* of wildlife
3. Era of protection
   a. Birth of *sport* hunting
   b. *Protection* of wildlife
4. Era of habitat and harvest
   a. *Sport* hunting
   b. Conservation based on *wise use* and management of wildlife populations and habitats
5. Concern for wildlife sparked concern for all *RESOURCES*

All eras should be listed on chalkboard. Ask students to describe hunting and use of wildlife in each era. List key words next to eras.

Draw diamond shape on chalkboard used in LESSON 21. Add "*RESOURCES*" and explain.



J. ASSIGNMENT
Remind students of appropriate references for next lesson

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teacher comments:

UNIT X
LESSON 24
HUNTING IN EUROPE

references for instructors

Appendices: **F, G**

references for students

G *Some Aspects of European Hunting and Game Management* (xeroxed copies for students)

teaching aids

- ☐ Chalkboard
- ☐ Overhead projector
- ☐ Screen
- ☐ **ref. F** Prepare overhead transparency 29. Hunter Training

content outline	teaching methods
INTRODUCTION (2 minutes)	
A. WHY STUDY EUROPEAN SYSTEMS? **ref. G** 1. Successful system for many years 2. Hunters are respected members of society 3. Long-standing traditions and ethics	Ask students why this topic is included in a course on hunting in America. Discuss reasons.
LESSON DEVELOPMENT (38 minutes)	
B. FACTS ABOUT EUROPE AND HUNTING **ref. G** 1. European countries are developed a. Human population densities are high b. Highly industrialized 2. Hunting and game management systems vary in each country 3. Game harvests are relatively large	Discuss. Give examples.
C. COMPARISON OF U.S. AND CENTRAL EUROPEAN PHILOSOPHIES **ref. G** 1. Game ownership 2. Management 3. Hunting seasons 4. Laws and regulations	Discuss basic differences in philosophies. Explain European system using information from Appendix G. Make a comparison table on chalkboard similar to Table 1 in Appendix G.

5. Law enforcement
6. Consumption of game
7. Public attitudes towards hunting

D. HOW TO BECOME A HUNTER **ref. G**
1. Anyone with enough interest can be a hunter
2. Training courses - taught by hunter associations
   a. 15—20 hours of lecture and studying at home
   b. Six months' "practice"
   c. Written and oral examinations

Discuss. Compare with requirements for U.S. hunters.
Use transparency 29 to identify subjects and requirements.

E. HUNTING METHODS **ref. G**
1. Stalking
2. Sitting
3. Drives
   a. Beaters are hired to drive game to hunters
   b. Simple and elaborate drives are conducted

Briefly discuss. Compare to hunting methods in U.S.

F. HUNTING CUSTOMS, TRADITIONS AND ETHICS **ref. G**
1. Traditions and ethical behavior are important
   a. Hunters receive training on these subjects
   b. Ethical behavior is expected - hunters who behave poorly are ostracized
2. Examples of customs and traditions
   a. The "last bite"
   b. Display of fallen game

Stress importance.

Give examples from Appendix G.

G. THE HUNTER'S PLACE IN SOCIETY **ref. G**
1. Hunting is a *specialized sport*
2. Hunters are *dedicated* people
   a. Well-trained
   b. Take care of game year-round
   c. Responsible for game management
3. *Society benefits* from hunting activities
   a. Landowners are rewarded for their efforts
   b. Hunters provide game meat for public
   c. Wildlife is there for all to see

Discuss. List key words on chalkboard.

SUMMARY (10 minutes)

H. SOME CONCLUSIONS **ref. G**
1. European hunting and game management
   a. European management systems have proven successful in highly industrialized countries with large human populations
   b. European hunters are respected members of society

Discuss.

2. American wildlife managers and hunters can benefit by knowing about European systems
   a. Managers can apply some successful techniques used in Europe
   b. Hunters can improve their image by following the example of European hunters

Stress importance of improving hunter's image.

I. ASSIGNMENT
1. Next two lessons concern wildlife management. Ask students to read about wildlife management successes and sources of money for wildlife conservation.
2. Hand out reproduced copies of Appendix G.
3. Divide the class in four groups and assign each group to one of the following topics:
   a. Respect for resources - wildlife and environment
   b. Respect for landowners and property
   c. Respect for yourself and other hunters
   d. Respect for non-hunters

Ask groups to prepare lists of "unwritten laws" for hunters that are related to assigned topics. Students can use class texts, outside reading material and personal opinions to prepare lists. Each group should be ready to discuss their list during LESSON 30 and recommend *three steps* to improve the hunter's image during LESSON 31.

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teacher comments:

UNIT X
LESSON 25

WILDLIFE MANAGEMENT - HABITAT

references for instructors

Appendices: **F**

references for students

teaching aids

NOTE: Invite a wildlife management expert to present this lesson. Instructors can provide lesson plans, overhead transparencies and instructor references to help guests prepare. Contact universities and wildlife agencies as sources of speakers.

- ☐ Chalkboard
- ☐ Overhead projector
- ☐ Screen
- ☐ **ref. F** Prepare overhead transparencies
  - 22. Habitat Triangle
  - 23. Ecological Succession
  - 24. Habitat and Wildlife Changes

content outline	teaching methods
INTRODUCTION (10 minutes)	
A. DEMAND AND SUPPLY 1. Demands (needs for survival) a. Food - grocery store b. Water - faucet c. Shelter - house 2. Supply (the environment) a. Environment must fulfill all needs b. Living components c. Non-living components	Ask students to identify their survival needs and how those needs are fulfilled. List answers on chalkboard. Have students describe their current environment as example.
LESSON DEVELOPMENT (35 minutes)	
B. HABITAT (THE HOME ADDRESS) 1. Needs are always the same a. Food b. Water c. Shelter - five functions	Select a common game species in your area and use it as example throughout discussion. Transparency 22. Give examples.

2. Space and arrangement a. Home range b. Territory c. Migratory species 3. Ecological niche (animal's "profession" in its habitat) 4. Habitat is key to wildlife survival	Transparency 22. Contrast needs of two species in your area and discuss. Use waterfowl for example. Discuss. Compare to specialized jobs in a business and give wildlife examples.
C. CARRYING CAPACITY 1. Determinants of carrying capacity a. Amount, quality and distribution of habitat is primary factor b. Social system 2. Limiting factors 3. Carrying capacity *constantly* changes a. Seasonal variations b. Ecological succession (discussed next)	Write definition on chalkboard. Ask students what might control population size in a habitat. Discuss. Give example.
D. SUCCESSION (NATURAL AGING) 1. Amount, quality and distribution of habitats are *constantly* changing a. Changes gradual if undisturbed b. Successional stages 2. Numbers and kinds of wildlife change with each stage a. The "edge" effect b. Habitat diversity encourages diverse wildlife	Define and discuss. Transparency 23. Transparency 24.
E. HABITAT CHANGES 1. Natural disturbances can set back succession and create diverse habitats for wildlife a. Wildfire b. Insects and diseases c. Others - as needed 2. Man's activities set back succession and can benefit wildlife if managed properly a. Controlled fires b. Regulated grazing c. Plowing and planting d. Proper logging e. Wildlife managers must control succession to meet wildlife's needs 3. Man's activities can harm environment 4. Wholesale destruction of habitat is the major threat to wildlife survival	Discuss. Give example. Give several examples. List activities on chalkboard. Use example of recent habitat destruction in your area. Discuss effects on wildlife.
SUMMARY (5 minutes)	
F. WILDLIFE HABITAT 1. Habitat a. Food b. Water c. Shelter	Repeat major points. Ask questions.

d. Space and arrangement
2. Carrying capacity
3. Succession
   a. "Edge"
   b. Habitat diversity
4. Habitat changes
   a. Beneficial activities
   b. Destruction of habitat is greatest threat to wildlife survival
5. Humans can enhance habitats to meet needs of wildlife

G. ASSIGNMENT
Remind students of appropriate references for next lesson.

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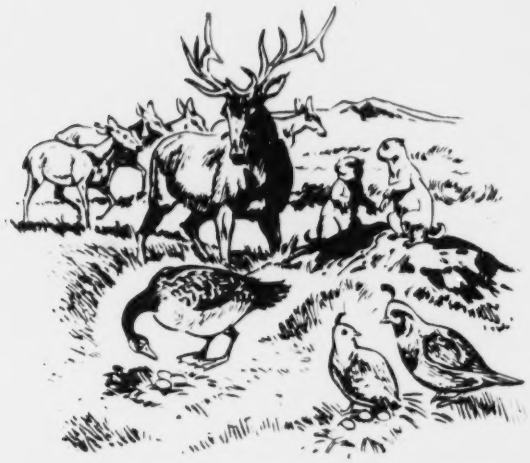
teacher comments:

UNIT X
LESSON 26
WILDLIFE MANAGEMENT - POPULATIONS



references for instructors

Appendices: F

references for students

teaching aids

NOTE: Invite a wildlife manager to teach this lesson. Provide a lesson plan, teaching aids and references to help your guest prepare.

- ☐ Chalkboard
- ☐ Overhead projector
- ☐ Screen
- ☐ **ref. F** Prepare overhead transparencies
  - 25. Threatened and Endangered Species
  - 26. Population Bathtub
  - 27. Population Growth
  - 28. Biological Surplus

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. WHY SPECIES BECOME ENDANGERED 1. Habitat alteration is major cause 2. Regulated sport hunting has never "endangered" a species. This LESSON tells why.	Ask students if sport hunting endangers wildlife species. Take a "vote" and have students justify their votes. Use transparency 25 to discuss reasons.
LESSON DEVELOPMENT (40 minutes)	
B. WILDLIFE POPULATIONS 1. Factors increasing populations a. Immigration b. Births 2. Factors decreasing populations a. Emigration b. Starvation c. Weather (exposure) d. Predation e. Disease f. Old age	Discuss. Use transparency 26 to demonstrate inputs and outputs of populations. List factors on chalkboard. Discuss.

g. Hunting
h. Accidents
i. Pollution

C. BIOLOGICAL SURPLUS — Transparency 27.

1. Wildlife produces numbers in excess of carrying capacity
2. Wildlife cannot be stockpiled — Transparency 28. Develop analogy with a rancher's herd of livestock.
   a. Excess wildlife dies or moves to new area
   b. Mortality is compensatory with some species — Review death factors. Explain.
3. Regulated hunting takes only the surplus

D. POPULATION CHARACTERISTICS — Give examples of wildlife in each category. Discuss

1. High producers with short lives
   a. Rapid population turnover
   b. Up to 90 percent yearly loss
2. Medium-to-high producers with medium-length lives
   a. Population turnover slower than D.1.
   b. Yearly loss approximately 50 percent
3. Low producers with long lives
   a. Slow population turnover
   b. Yearly loss 33 percent or less
   c. Uncontrolled populations of large mammals can destroy their habitat — Give example.
4. Management is based on population characteristics

E. WILDLIFE MANAGER'S JOB — Briefly describe management process for a game species to illustrate. List major duties on chalkboard.

1. Evaluate habitats and populations
2. Manage habitats and populations
   a. Species' needs vary
   b. "Tailor-made" management to meet needs of all wildlife — Compare management of migratory and resident wildlife as example.
3. Establish management areas
4. Manage people who use wildlife and habitats

F. AMERICAN MANAGEMENT SYSTEM — Describe organizations and agencies.

1. Private organizations
2. State agencies
3. Federal agencies
4. International agencies and treaties

G. THE HUNTER'S CONTRIBUTION — Discuss. List contributions on chalkboard.

1. Hunters support wildlife conservation
   a. *Funding* for state and private programs
   b. Political voice for management
2. Control of populations - big game

3. Provide management facts
   a. Population information
   b. Examination of animals

SUMMARY (5 minutes)

H. SOME CONCLUSIONS

Repeat these important points.

1. Regulated sport hunting has never "endangered" a wildlife species
2. Sport hunting is a legitimate use of hunted populations
   a. Hunting is carefully regulated
   b. Hunting takes only the surplus
3. Wildlife populations differ in characteristics
   a. High producers - short lives
   b. Medium-to-high producers with medium-length lives
   c. Low producers with long lives
4. The resource is the primary concern of wildlife managers
5. Hunters make an important contribution to wildlife conservation
   a. *Funding* and support
   b. Population control (big game) and management facts
6. Hunters function as part of a natural system and should understand the system

Draw diamond shape on chalkboard. Review hunter's *responsibility* to *resources* as introduced in LESSONS 21 and 23.

I. ASSIGNMENT

Remind students of appropriate references for next lesson.

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teacher comments:

UNIT X
LESSON 27

WILDLIFE LAWS

references for instructors

references for students

teaching aids

NOTE: Invite the local wildlife law enforcement officer to present LESSON 27. Instructors can provide lesson plans and teaching aids to help guests prepare.

- ☐ Chalkboard
- ☐ "Plug" for shotgun
- ☐ Migratory Waterfowl stamp
- ☐ Examples of hunting licenses
- ☐ Daylight fluorescent orange vest or hat
- ☐ Examples of hunting laws, regulations, and statutes

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. WHAT ARE THE CONSEQUENCES? 1. Law enforcement officer 2. News media 3. Hunters 4. Non-hunters 5. Anti-hunters	Describe an imaginary violation of wildlife laws such as killing and leaving big game. Ask students how each group shown under A. would react to this violation and what ultimate results might be.
B. VIOLATORS REPRESENT A DIRECT THREAT TO ALL HUNTERS AND THEIR SPORT	
LESSON DEVELOPMENT (40 minutes)	
C. THE NATURE OF LAWS 1. Laws are publicly recognized measures deemed so important that they appear in *written form* and *provide for punishment* of violators 2. A variety of federal and state laws has been created to protect all wildlife, people and property	Discuss importance of laws which society has created through elected or appointed officials.

D. TYPES OF LAWS

1. Protection of the resource
   a. Seasons
   b. Closed areas - refuges
   c. Limits on hunting methods and firearms
      i. "Plug" requirement for migratory birds
      ii. Gauge limitations for migratory birds
   d. Provide funding
      i. Migratory waterfowl stamp
      ii. Hunting licenses
   e. Others - as needed
2. Protection of people and property
   a. Hunter safety requirements
   b. Safety zones
   c. Shooting and public roads
   d. Shooting and liquor (drugs)
   e. Loaded firearms in vehicles
   f. "Blaze orange" laws
   g. Permission to hunt on private property
   h. Littering laws
   i. Others - as needed
3. Insure a fair share for all hunters
   a. Licenses and special permits
   b. Bag limits
   c. Others - as needed
4. Insure fair chase
5. Provide information about wildlife populations
   a. Check stations
   b. Hunter report cards
   c. Others - as needed

List categories D.1. through 5. on chalkboard.
Give examples of laws important in your area and ask students *what* category each law belongs in and *WHY*.
Describe laws.

Pass "plug" around class.

Pass license and waterfowl stamp around class.
Describe laws.

Hold up example.

Pass example around class.

E. HUNTER RESPONSIBILITIES

1. Read and observe *all* game laws
   a. Keep up to date - laws change often
   b. Free copies available
   c. If you think a law is not necessary then work to change it. Disagreeing with a law is no excuse for disregarding it.
2. Report violations and act as witness
   a. Wildlife law enforcement officers cannot do the job alone
   b. Responsible hunters willing to report "misfits" is the surest deterrent to violations
3. What to do if you see a violation
   a. Take no direct action
   b. Note time and date
   c. Describe location accurately

Discuss.

Hand out examples of free information concerning laws in your area.

Discuss thoroughly. Ask 1) how many students have observed violations and 2) how many reported them?

Discuss violation report cards

d. Describe suspects and vehicle
e. Describe illegal acts and wildlife taken

SUMMARY (5 minutes)

F. THE HUNTER'S ROLE

1. Wildlife laws are created to protect the resource, people and property
2. Hunters have two major obligations
   a. Read and obey wildlife laws
   b. Aid in apprehending and prosecuting violators
3. Hunters policing their own ranks will help to insure the future of their sport

Review types of laws and hunter responsibilities. Ask questions.

Emphasize importance.

G. ASSIGNMENT
Remind students of appropriate references for next lesson.

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teacher comments:

UNIT X LABS

Activities

A. Survival and First Aid
B. Hunting Methods
C. Wildlife Identification
D. Game Care

(Suggested time: 6 hours)

APPROACH

Discussion of hunter responsibilities continues in laboratories. Suggested activities allow students to acquire knowledge and skills. The primary goal is for students to understand and accept these obligations.

FACILITIES and EQUIPMENT

Specific needs for facilities and equipment will vary with the type of exercise you select. Some ideas about facilities and equipment appear under each suggested activity.

ACTIVITIES

A. SURVIVAL AND FIRST AID (½ hour or for greater detail use ADVANCED LESSON 43)

Personal safety and preparedness are subjects of immediate concern to all hunters. Preparation for a hunt is a contributing factor to hunting success, and knowing what to do in emergency situations can mean the difference between life and death.

1. Discuss checklists assigned in LESSON 22. Organize a composite checklist using student input from their lists.
2. Expand discussion of hunt preparation, survival and first aid as it relates to hunting conditions and potential survival situations in your area. Bring a sample survival kit and other equipment to this session.

B. HUNTING METHODS (1 hour minimum) - Use one or more ADVANCED LESSON(S) in UNIT XII.

C. WILDLIFE IDENTIFICATION (1½ hours)

Appreciation of wildlife begins with knowledge of life histories and habitats as well as identification of each species. Hunting success is directly related to the hunter's ability to choose the right place to hunt and find game. Hunters must then be able to positively identify their quarry before firing a shot.

1. Select popular game animals in your area. Describe how life history information and knowledge of preferred habitats are valuable when selecting hunting areas and locating game.

2. Describe how to identify wildlife in your area. Films and slides, booklets or mounted specimens are essential. Contact wildlife experts and agencies for information and visual aids which are available from many sources. Instructors may want to ask a wildlife expert to help with this session.

   The following subjects should be included in this presentation:

   a. Need for proper identification
      - Safety
      - Legal restrictions
      - Ethical considerations
      - Trophy quality
      - Complete hunting experience

   b. Indirect methods of identification
      - Reading the habitat
      - Tracks
      - Scat and droppings
      - Others - as needed

   c. Direct methods of identification
      - Colors
      - Sizes
      - Shape
      - Others - as needed

   NOTE: If museums or zoos are easily accessible, an optional field trip is an excellent way to learn how to identify wildlife.

3. Prepare a list of wildlife that your class should be able to identify. Advise students that they will be given a test covering identification of these animals.

D. GAME CARE (3 hours)

Game care starts during hunt preparation and ends as a gourmet's delight at the dinner table. Hunters have obligations before, during and after the hunt to insure game is cared for properly.

1. Involve students in a discussion of responsibilities for game care before and during a hunt. The following subjects should be included in this discussion by using examples of hunted species in your area:

   a. Insuring a clean kill
      - Select proper firearm and ammunition
      - Become a proficient marksman and know your capabilities
      - Know "vital areas" to shoot at
      - Know how to estimate ranges for effective shots
      - Take only good shots
      - Use steadiest position possible

b. Locating downed game and signs of wounding

Watch the animal after you shoot to observe its reactions and movements

Mark the animal's location

Go to the marked spot and look for sign such as blood, hair, feathers or other indications of wounding

Follow game until it is recovered or you confirm a "clean miss"

c. Equipment needed for field care of game.

2. Demonstrate and discuss field care of big game, small game and upland game birds and waterfowl. If sufficient equipment and assistant instructors are available, divide students into small groups for this exercise. Allow each group to field dress animals available. The discussion should include field care of skins and hides for trophies or other purposes.

Wildlife agencies may be helpful in locating game animals for field dressing and cleaning exercises. For example, the Colorado Division of Wildlife helps instructors at Colorado State University by providing road kills in good condition or animals which must be destroyed. Contact wildlife agencies and use wild game when possible.

If wild game is not available, the following domestic animals are useful for this session:

a. Chickens - upland game birds and waterfowl
b. Rabbits - small game
c. Goats - big game

Rabbits can be used to illustrate big game care when facilities or time are limited. Dress the rabbit using big game cleaning techniques.

3. Briefly discuss transportation and home care of game, including these topics:

a. Transportation of game

Some people do not like to see dead animals. Respect the feelings of other people.

Keep meat cool, dry and clean

b. Home care of game

Aging
Butchering
Wrapping and freezing
Cooking

If more than three hours are available, have small groups of students butcher animals used in the field care exercise.

NOTE: Home care ends at the dinner table. An optional "game feast" is suggested as a proper ending to the hunting unit. Students and instructors can cook a variety of game meats and get together to share recipes and hunting experiences.

Hunting and wildlife conservation

References and notes

appendices

F. *Overhead Transparencies*

G. *Some Aspects of European Hunting and Game Management*

UNIT XI

Hunting ethics

RESOURCES
RESPECT
RESPONSIBILITY
RESTRAINT
FIELD
GUIDE

UNIT XI

Hunting ethics

(Suggested time: 4 hours)

purpose

Teaching about hunting ethics is a difficult task. Hunter behavior cannot always be classified into categories of "right" or "wrong." This unit approaches ethics by exposing students to other points of view and the views of authors who have written on the subject. Open discussion allows exchange of ideas that can help students define their own values and understand the ethics of others. UNIT XI provides students with a starting point in developing and refining their own "code of ethics."

objectives — students will be able to:

1. Understand and appreciate arguments for and against hunting.
2. Distinguish anti-hunting sentiments from anti-hunter sentiments and identify sources of these sentiments.
3. Discuss steps necessary to resolve the hunting controversy.
4. Understand what is meant by "hunting ethics."
5. Describe the development of hunting ethics in America.
6. Recognize the need to maintain high standards of conduct for themselves and other hunters.
7. Understand and discuss hunting ethics related to resources and people.
8. Understand and appreciate the importance of setting a proper example for other hunters and teaching others to behave ethically.
9. Describe problems with the hunter's image and discuss specific solutions to those problems.

Continued on next page

Lessons

28. The Hunting Controversy
29. Hunting Ethics In America
30. Respect For Resources And People
31. Improving The Hunter's Image

Instructor References

Student Texts

evaluation of students

Student learning from UNIT XI cannot be measured as in previous units. The amount of student input and degree of involvement during discussions is perhaps the best way to assess expected outcomes. "Open-ended" test questions can be used to extend classroom discussion and allow individual students to express their thoughts.

Instructors may wish to use panel discussions about hunting ethics. Evaluate students based on the amount of preparation and the quality of their presentations if panels are used.

One suggested project is a paper addressing hunting philosophy and ethics. Students select topics of interest and search for written material about their subjects. Papers should examine the philosophical views of established authors so that students learn what others have said about hunting. This exercise can be used in at least two different ways. First, papers might be assigned early in the program as a means of preparing students for discussions in UNIT XI. Second, instructors can assign papers at the beginning of UNIT XI.

UNIT XI
LESSON 28

THE HUNTING CONTROVERSY

references for instructors

references for students

teaching aids

- ☐ Film
- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ Chalkboard

content outline	teaching methods
INTRODUCTION (30 minutes)	
A. FILM - Use film, story or anecdote to establish hunting controversy	Ask students to watch for pros and cons of hunting.
LESSON DEVELOPMENT (15 minutes)	
B. REASONS FOR HUNTING 1. Hunting is a privilege 2. Hunting is a personal sport a. Back to nature b. Getting away from it all c. Aesthetics d. Companionship e. Test of skill and personal ethics 3. *Meditations on hunting* - Ortega Y Gasset a. Hunting an expression of our evolutionary history b. "One does not hunt in order to kill; on the contrary, one kills in order to have hunted" 4. Hunting is an exercise in personal freedom	Ask students to identify reasons for hunting. Make a list of "pros" on chalkboard. Discuss.

C. ARGUMENTS AGAINST HUNTING

Have students identify "cons" of hunting. List on chalkboard. Discuss.

1. Anti-*hunting* sentiments
   a. Anti-killing attitudes
   b. Killing of any wildlife for *sport* is immoral
2. Anti-*hunter* sentiments
   a. Findings of National Shooting Sports Foundation survey of public attitudes towards hunters. Many people believe that hunters 1) lack knowledge about wildlife and hunting, 2) mistreat wildlife and 3) exhibit poor ethics and behavior.
   b. An important issue

Write survey findings on chalkboard and discuss. Emphasize importance.

D. SOURCES OF "ANTI" SENTIMENTS

Identify and discuss possible reasons for "anti" sentiments.

1. Urbanization - man is separate from nature
2. Anti-killing attitudes - Vietnam War
3. Misconceptions about the environment
   a. Dynamics
   b. Interrelationships
4. Misconceptions about wildlife
   a. Movies, television and books
   b. Mythical world where wild creatures are humanized and nothing ever dies is accepted as reality
5. Misconceptions about hunters
   a. Anyone with a gun is a hunter
   b. Market hunters and sport hunters are one of a kind
   c. Hunters do not respect life or wildlife
6. Bad experiences with hunters or stories about hunters

SUMMARY (5 minutes)

E. RESOLVING THE ISSUE

Discuss. Circle each argument against hunting listed on chalkboard and write down key words describing solutions.

1. Morality of hunting
   a. A personal choice
   b. No "right" answer
2. Correct misconceptions through education
   a. About the environment and man's role
   b. About wildlife
   c. About hunters
3. Improve the quality of hunters
   a. Personal conduct must be ethical
   b. Teach others hunting traditions and ethics
   c. Do not tolerate unsportsmanlike conduct
   d. Respect rights of non-hunters - hunting is not a spectator sport

4. Join with *anyone* concerned with critical issues
   a. Maintenance and development of habitat
   b. Conservation of wildlife populations

F. ASSIGNMENT
Remind students of appropriate references for next lesson.

---

teacher comments:

UNIT XI
LESSON 29
HUNTING ETHICS IN AMERICA

references for students

references for students

teaching aids

- ☐ 16 mm projector or video
- ☐ Screen or monitor
- ☐ Chalkboard

content outline	teaching methods
INTRODUCTION (5 minutes)	
A. UNSPORTSMANLIKE CONDUCT 1. Most sports have a referee to insure proper conduct 2. Hunters must be their own referees	Ask students for the definition of this term as used in football and discuss results of poor conduct (ejection from the game). Relate to hunting.
LESSON DEVELOPMENT (40 minutes)	
B. WHAT ARE HUNTING ETHICS? 1. Unwritten laws for acceptable behavior a. Sportsmanship b. Proper conduct and safety c. Courtesy and common sense 2. Hunters develop their own sets of personal values 3. What is acceptable to some may not be acceptable to others	Ask students to define ethics. Discuss. Give example. Compare to written and unwritten shooting range rules discussed in UNITS V through VII. Give example of European custom such as hiring "beaters" to chase game to the gun.

C. HUNTING ETHICS IN AMERICA

1. America is a nation of immigrants with different backgrounds - including hunting customs
   a. Hunting developed under the "frontier philosophy"
   b. Rapid social change and technological developments
3. Hunting customs in America are not well defined and are undergoing constant change

Discuss. Compare time-honored traditions of European hunters with relatively few traditions of American sport hunters.

D. FILM - Use film or video that shows sportsmen's ethics.

1. An attempt to define hunter ethics in America
2. Excellent introduction to ethics discussion

Introduce film. Ask students to note general areas for ethical concern and identify specific ethics.

E. CATEGORIES FOR HUNTER ETHICS

1. Respect for resources
   a. Wildlife and hunted species
   b. Land and the environment
2. Respect for people
   a. Yourself
   b. Other hunters
   c. Landowners and their property
   d. Non-hunters

Ask students to identify areas for ethical concern. List answers on chalkboard and have students give examples of ethics shown in film. Announce that next LESSON will discuss these further.

SUMMARY (5 minutes)

F. IT ISN'T EASY

1. Individual hunters develop their own "code of conduct"
2. Acceptable behavior is not well-defined in a list of simple "do's and don't's"
   a. Hunters have different backgrounds
   b. Personal ethics will vary
3. One way of summarizing ethics in categories
   a. Respect for resources
   b. Respect for people

Repeat these important points. Use differences in student attitudes which surfaced in earlier discussions to emphasize points.

G. ASSIGNMENT

1. Remind students of appropriate references for next lesson.
2. Remind students that their group's list of ethics will be discussed in LESSON 30. The original assignment was made during LESSON 24.

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teacher comments:

UNIT XI
LESSON 30
RESPECT FOR RESOURCES AND PEOPLE

references for instructors

references for students

teaching aids

☐ Chalkboard

NOTE: Control discussions during LESSON 30 to complete the session in the time allotted. This LESSON can be expanded by spending more time on each major area of ethical concern. These topics generate lively and useful discussions among students.

content outline	teaching methods
INTRODUCTION (2 minutes)	
A. TALKING ABOUT ETHICS	List major headings for discussion of ethics on chalkboard. Leave space beneath each heading to write key words. Subject areas for ethical concerns should coincide with topics assigned to student groups in LESSON 24.
1. Respect for resources a. Wildlife b. Environment 2. Respect for people a. Landowners and property b. Yourself and other hunters c. Non-hunters	
LESSON DEVELOPMENT (45 minutes)	
B. RESPECT FOR RESOURCES	
1. Wildlife and hunted species a. Knowledge about wildlife and habitats b. Rules of "fair chase" c. Humane harvest - proper equipment and marksmanship d. Obey laws e. Support conservation f. Hunting skills	Discuss. Ask appropriate group to identify ethical concerns. List key words on chalkboard and have students define proper conduct in each case. Let group members complete their list and have remainder of class add other concerns. Topics shown under B. will probably be identified by students. Instructors should add ethics not identified.

g. Pursuing wounded game
h. Proper game care and preventing waste
i. Taking only what you will use

2. Environment
   a. Pick up litter, clean campsite
   b. Careful use of fire
   c. Responsible use of vehicles
3. What about these?
   a. Shooting birds on water, ground or out of trees
   b. Hunting deer with dogs/birds with dogs
   c. Baiting of game
   d. Burying garbage in the field
   e. Others - as needed

Identify ethics which are not easily described and apply to hunting in your area. Some examples appear under 3. Have students discuss their views by attempting to classify behavior as illegal and/or unethical.

C. RESPECT FOR LANDOWNERS AND PROPERTY

1. Always ask permission
   a. Seek permission before opening day
   b. Understand landowner's problems
2. Thank landowner after the hunt
3. Offer to share bagged game with landowner
4. Leave things as you found them
   a. Gate
   b. Follow landowner's instructions
   c. Stay away from livestock and buildings
   d. Control hunting dogs
5. Park vehicles out of the way
6. What about these?
   a. Treatment of landowners who deny permission and may be rude
   b. Giving landowner uncleaned game you have bagged
   c. Reporting problems you observe on the landowner's property which he might blame on you
   d. Others - as needed

Discuss. Ask appropriate group to identify ethical concerns. List key words on chalkboard and have students define proper conduct in each case. Let group members complete their list and have remainder of class add other concerns. Topics shown under C. will probably be identified by students. Instructors should add ethics not identified.

Identify ethics which are not easily described and apply to conditions in your area. Some examples appear under 6. Have students discuss their opinions.

D. RESPECT FOR YOURSELF AND OTHER HUNTERS

1. Safety at all times
2. Proper clothing and equipment
3. Proper physical condition
4. Skilled in outdoor lore
5. Respect for other hunters' rights by not interfering with their hunt
   a. Unnecessary noise - talking, shooting, slamming car doors, etc.
   b. Improper clothing - bright colors on duck hunt
   c. Taking all the shots - giving no advantage to other hunters
   d. Improper use of duck or other calls
   e. Shooting out of range
   f. Claiming game belonging to another
   g. Following other hunters to blinds
   h. Entering other hunter's territory

Discuss. Ask appropriate group to identify ethical concerns. List key words on chalkboard and have students define proper conduct in each case. Let group members complete their list and have remainder of class add other concerns. Topics shown under D. will probably be identified by students. Instructors should add ethics not identified.

6. Avoid drinking while hunting
7. Dog etiquette
   a. Improperly trained dogs out of control
   b. Shooting rabbits around bird dogs
8. Doing your share of the work
   a. Around hunting camps
   b. Caring for game
9. What about these?
   a. Telling other hunters about "secret spots" which your companion showed you
   b. Party hunting - shooting game for others
   c. Giving commands to another's dog
   d. Others - as needed

Use boat casualty statistics, examples of drinking image held by hunters or other sources to explore problems.

Identify ethics which are not easily described and apply to hunting in your area. Some examples appear under 9. Have students discuss their opinions.

E. RESPECT FOR NON-HUNTERS

1. Safety at all times
2. Avoid display of firearms
3. Avoid unnecessary displays of dead animals
4. Tell hunting stories only to interested persons. Some people don't like to hear about hunting experiences.
5. Respect views of non-hunters whether you agree or not
6. Others - as needed

Discuss. Ask appropriate group to identify ethical concerns. List key words on chalkboard and have students define proper conduct in each case. Instructors should add ethics not identified by students.

SUMMARY (3 minutes)

F. BEHAVE YOURSELF

1. Acceptable behavior is not always well-defined
2. Areas for ethical concern
   a. Respect for resources
   b. Respect for people
3. *RESPECT* is the key word

Review. Write diamond shape on chalkboard as first introduced in LESSONS 21, 23 and 26. Add "*RESPECT*" and explain.

G. ASSIGNMENT

1. Remind students of appropriate references for next lesson.
2. Remind students that their group's recommendations for steps to improve the hunter's image will be discussed in the next LESSON. This was part of assignment given in LESSON 24.
3. Have students prepare billfold-size card with personal ethical objectives written for constant reminder and progressive update.

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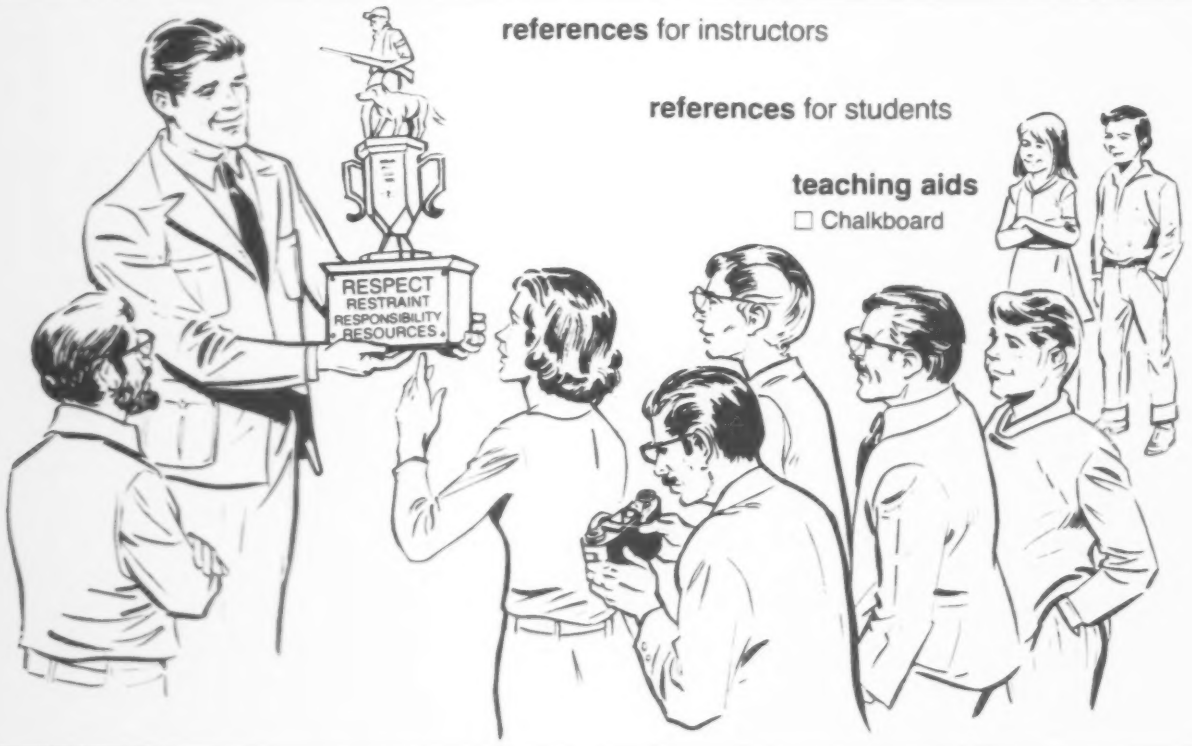
teacher comments:

UNIT XI
LESSON 31

IMPROVING THE HUNTER'S IMAGE



references for instructors

references for students

teaching aids

☐ Chalkboard

content outline	**teaching methods**
INTRODUCTION (5 minutes)	
A. EXPERIENCES WITH HUNTERS	Ask students what their experiences with hunters have been through direct contact, "stories" or news media. Discuss.
1. Most hunters have observed other hunters behaving illegally and/or unethically	
2. Non-hunters normally hear only "bad" reports about hunters from news media	
3. Why bother to be an ethical hunter?	Based on experiences discussed above, ask students why *they* should bother to behave ethically. List key words describing their reasons on chalkboard.
a. Personal satisfaction - ethical behavior adds to the hunting experience for the *individual* participating	
b. Hunter misbehavior represents a real and direct threat to sport hunting	
LESSON DEVELOPMENT (35 minutes)	
B. HOW ARE ETHICS LEARNED?	Discuss examples of behavior that young people see in the field.
1. By observing behavior of others	
2. Very few opportunities for young people to learn ethics	
a. Poor behavior is often accepted by hunters - set bad examples for young hunters	
b. Ignorance is the cause of some poor conduct	

C. THE PROBLEM

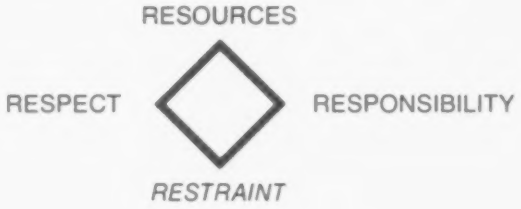
1. Misbehavior by some hunters - hunters still accept misbehavior by others
   a. Need for better training
   b. If solution was easy, the problem would be solved already
2. Misconceptions of non-hunters
   a. About wildlife and environment
   b. About hunters

Ask students to identify specific problems related to the hunter's image. List key words on chalkboard and discuss.

D. SOME SOLUTIONS

1. Behave yourself
   a. Set the example
   b. Strive for self-improvement
   c. Show *RESTRAINT* in all actions
2. Mandatory state education programs for young hunters - more than hunter safety
3. Develop a "hunter fraternity" of dedicated individuals - long-range training programs for hunters in gun clubs and other organizations
4. Education of non-hunters - correct misconceptions
   a. Use your teaching abilities
   b. Provide information to news media and correct inaccurate reports about wildlife and hunters

Ask student groups for their three solutions. List answers on chalkboard. Most answers will fall into the following categories: 1) Education and training, 2) Improve ethics and behavior, 3) Better law enforcement. Discuss.
Draw diamond shape on chalkboard.
Add "*RESTRAINT*" and explain.



TEACHING TIPS (5 minutes)

E. TEACHING ABOUT ETHICS

1. It is difficult to teach ethics
2. Avoid imposing your views on students. Instructors should maintain an open mind and allow students to express their views.
3. Discussions among students help define ethics and create understanding

Discuss.

SUMMARY (5 minutes)

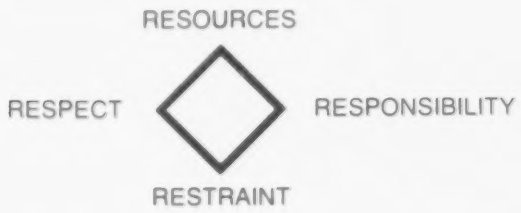
F. PARTING THOUGHTS

1. Two basic principles of hunting
   a. Hunting is not a spectator sport. Do not infringe upon the rights of those that may be watching.
   b. Hunting is a personal sport. Do not infringe upon the rights of other sportsmen.

List on chalkboard. Discuss.

2. Accomplishing the principles of hunting
   a. *Resources* - Hunters function as part of a natural system. Understand the system and yourself.
   b. *Respect* - Once you know yourself and the system, respect other people and the system.
   c. *Restraint* - When in doubt about safety, proper hunting conduct or attitudes of other persons, do not forge ahead without thinking. Stop and find out.
   d. *Responsibility* - Hunting requires responsible behavior that exhibits knowledge, skills and ethics. Improve yourself and help others to follow in your footsteps.

Refer to diamond shape on chalkboard. Summarize each component.



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teacher comments:

Hunting ethics

References and notes

UNIT XII

Advanced hunting programs

UNIT XII

Advanced hunting programs

(No suggested time allocation. Lessons require a minimum of 12 hours; laboratories are project oriented and time would vary with objectives of instructor)

purpose

UNIT XII provides lesson outlines and laboratory activities for teaching how to hunt general types of game. Specific lesson plans are not given because these subjects are broad in scope with regional differences. Instructors may wish to concentrate on these subjects for advanced programs or merely introduce the considerations that are outlined for beginning hunter education programs.

Outlines discussing archery, muzzleloading, map reading and survival are included as well. Since these disciplines have comprehensive programs and voluminous literature associated with them, this manual will outline basic considerations for hunting and encourage instructors to seek other information sources if their program objectives dictate.

objectives—students will be able to:

1. Understand the importance of planning a hunt using proper equipment and insuring safety.
2. Propose methods for hunting game animals and describe a hunt.
3. Know about habitats and life histories of wildlife.
4. Identify wildlife through direct and indirect means.
5. Understand and describe how to insure clean kills and find downed game.
6. Describe proper care of bagged game.
7. Understand proper selection of firearms and ammunition for hunting desired wildlife.
8. Understand accepted ethics of the locale.
9. Use archery, muzzleloading and map reading equipment with degree of competence desired by instructors.
10. Understand basic survival and first aid.

Continued on next page

Lessons

32. Big Game Hunting
33. Small Game Hunting
34. Hunting Upland Game Birds
35. Waterfowl Hunting
36. Turkey Hunting
37. Predator Calling
38. Archery Equipment
39. Shooting the Bow
40. Bowhunting For Big Game
41. Muzzleloading
42. Map Reading
43. Survival

Labs/Activities

A. Ask The Hunting Experts
B. Hunting Interns
C. Field Trips
D. Hunting With A Camera
E. Interviews
F. Hunting Lore
G. Wildlife Diseases
H. Wildlife Nutrition

evaluation of students

Written and/or oral tests may be given over content covered in class or in assignments. Students may be observed on field trips or during hunting internships. Journals may be kept about field trips, internships, hunting experiences, interviews, literature searches, class experiences, etc. Evaluation for this unit could consider all knowledge, skills and ethics taught throughout the manual. Positive behavioral change has been the goal throughout. Behavioral change is difficult to measure due to variability of students and lack of time for adequate observation. Therefore, instructors may have to resort to objective tests or subjective reviews of written material.

Instructor References

Sport hunting magazines and books discuss hunting techniques and are available from many sources.

Student Texts

UNIT XII
ADVANCED LESSON 32

BIG GAME HUNTING (Rifle, Handgun or Shotgun)

references for instructors

content outline	**teaching methods**

A. HUNT PREPARATION
1. Physical conditioning
2. Clothing and personal equipment
3. Hunting camps and equipment
4. Guides and outfitters
5. Use and care of horses and packing equipment
6. Selecting firearm and ammunition
   a. Caliber or gauge
   b. Sight selection
   c. Bullet types and weights
   d. Effective range of firearm
7. Sighting in and improving shooting skills
8. Laws and regulations
9. Landowner's permission
10. Scouting the hunting area

B. IDENTIFYING BIG GAME
1. Life history of species
2. Direct methods
3. Indirect methods
4. Trophy estimation
5. Estimating ages

C. HUNTING METHODS

1. Safety and ethics
2. Where to find game and how to read sign
3. Stalking techniques
   a. Timber or heavy brush
   b. Open areas
4. Still-hunting
   a. Blinds
   b. Tree stands
   c. Waterholes
   d. Trails
   e. Watching and waiting on ridges, saddles, etc.
5. Drives
6. Use of horses

D. BAGGING YOUR QUARRY

1. Estimating range
2. Shooting positions
3. Vital areas
   a. Bullet placement
   b. Signs of wounding
4. Tracking
5. Procedures for quick killing of wounded animals

E. GAME CARE

1. Field dressing
2. Transporting to camp and/or home
3. Butchering
4. Cooking

F. SURVIVAL AND FIRST AID

UNIT XII
ADVANCED LESSON 33
SMALL GAME HUNTING

references for instructors

content outline	teaching methods

A. RABBIT HUNTING
   1. Hunt preparation
      a. Clothing and essential equipment
      b. Selecting firearm and ammunition
      c. Effective shooting range of firearm
      d. Improving shooting skills
      e. Laws and regulations
      f. Locating hunting areas
      g. Landowner's permission
   2. Game identification
      a. Life history of species
      b. Direct methods
      c. Indirect methods
   3. Hunting methods
      a. Safety and ethics
      b. Where to find rabbits
      c. Hunting with others
      d. Hunting alone
      e. Use of dogs

4. Bagging your quarry
   a. Estimating range
   b. Shooting positions
   c. Shot placement or shooting techniques
   d. Procedures for quick killing of wounded animals
5. Game care
   a. Field dressing
   b. Transporting
   c. Cooking

B. SQUIRREL HUNTING

1. Hunt preparation (as in A.1.)
2. Game identification (as in A.2.)
3. Hunting methods
   a. Safety and ethics
   b. Where to find squirrels
   c. Stalking techniques
   d. Still-hunting
4. Bagging your quarry (as in A.4.)
5. Game care (as in A.5.)

UNIT XII
ADVANCED LESSON 34

HUNTING UPLAND GAME BIRDS

references for instructors

content outline	**teaching methods**

A. HUNT PREPARATION
   1. Clothing and essential equipment
   2. Selecting firearm and ammunition
      a. Gauge, barrel length and choke
      b. Shotshell load and shot size
      c. Effective shooting range of shotgun
   3. Improve shooting skills
   4. Laws and regulations
   5. Locating hunting areas
   6. Obtaining permission to hunt

B. GAME BIRD IDENTIFICATION
   1. Life history of species
   2. Direct methods
   3. Indirect methods

C. HUNTING METHODS
   1. Safety and ethics
   2. Where to find game and how to read sign
   3. Hunting with others
   4. Hunting alone
   5. Use of dogs
      a. Pointers
      b. Retrievers

D. BAGGING YOUR QUARRY
   1. Estimating range
   2. Shooting techniques
   3. Locating downed game
   4. Procedures for quick killing of wounded game

E. GAME CARE
   1. Field dressing
   2. Transporting
   3. Cooking

UNIT XII
ADVANCED LESSON 35
WATERFOWL HUNTING

references for instructors

content outline **teaching methods**

A. HUNT PREPARATION
1. Clothing and essential equipment
2. Selecting firearm and ammunition
   a. Gauge, barrel length and choke
   b. Shotshell loads and shot size
   c. Effective shooting range of shotgun
3. Improving shooting skills
4. Laws and regulations
5. Locating hunting areas
6. Landowner's permission

B. WATERFOWL IDENTIFICATION
1. Life history of species
2. On the wing
3. In the hand

C. HUNTING METHODS
1. Safety and ethics
2. Where to find waterfowl
3. Jump shooting
   a. Hunting alone
   b. Hunting with others

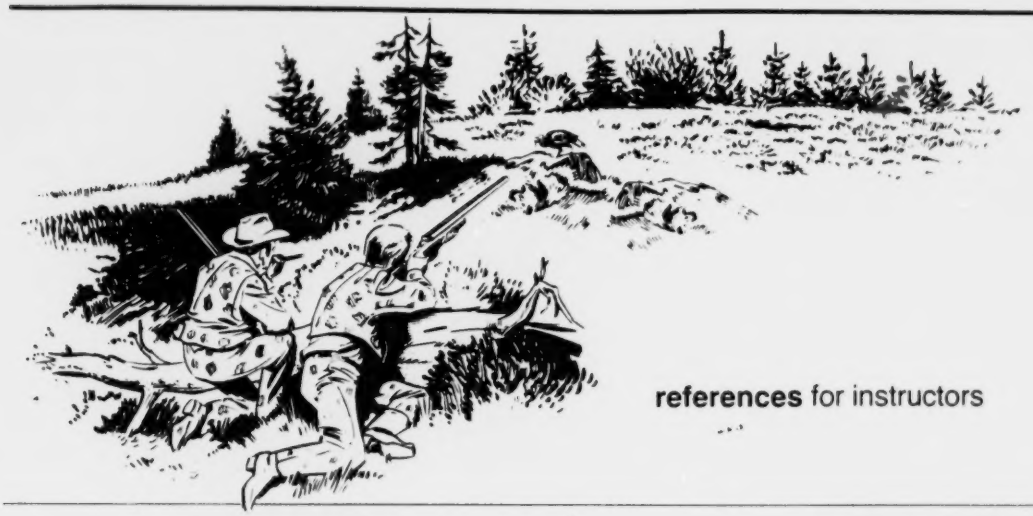
4. Pass shooting pros and cons
5. Hunting from blinds
   a. Blind construction and placement
   b. Use of decoys and decoy sets
   c. Waterfowl calling techniques
6. Use of boats
7. Use of retrievers

D. BAGGING YOUR QUARRY
1. Estimating range
2. Shooting technique
3. Retrieving downed waterfowl

E. GAME CARE
1. Field dressing
2. Transporting
3. Cooking

F. SURVIVAL
1. Hypothermia
2. Capsized boats

UNIT XII
ADVANCED LESSON 36
TURKEY HUNTING



references for instructors

content outline **teaching methods**

A. HUNT PREPARATION
1. Clothing and essential equipment
2. Selecting firearm and ammunition
   a. Caliber or gauge
   b. Bullets or shot sizes
   c. Effective shooting range of firearm
3. Laws and regulations
4. Landowner's permission
5. Scouting hunting areas

B. SEX IDENTIFICATION AND LIFE HISTORY

C. HUNTING METHODS
1. Safety and ethics
2. Where to find turkeys and how to read sign
3. Spring versus fall hunting
4. Stalking techniques
5. Still-hunting
   a. Blinds
   b. Turkey calls and calling techniques

D. BAGGING YOUR QUARRY
1. Estimating range and identifying gobblers
2. Shooting technique
3. Shot placement
4. Locating downed game

E. GAME CARE
1. Field dressing
2. Transporting
3. Cooking

UNIT XII
ADVANCED LESSON 37
PREDATOR CALLING

references for instructors

content outline **teaching methods**

A. HUNT PREPARATION

1. Clothing
   a. Camouflage, including face, hands and perhaps firearm
   b. Standard drab colors or white for snow
   c. Appropriate to weather - persons hunting in snow conditions can become wet and cold when remaining motionless
2. Selecting firearms and ammunition
   a. Archery
   b. Handguns
   c. Rifles in open country
   d. Shotgun at close range
   e. Use optimum firepower for clean kill without undue damage to pelt
3. Selecting and practicing on predator calls
   a. Open-reed
   b. Closed-reed
   c. Squeakers
   d. Howlers
   e. Injured pup
   f. Electronic calls (check regulations for use)

4. Improving shooting skills
5. Laws and regulations
6. Locating hunting areas
7. Obtaining permission to hunt

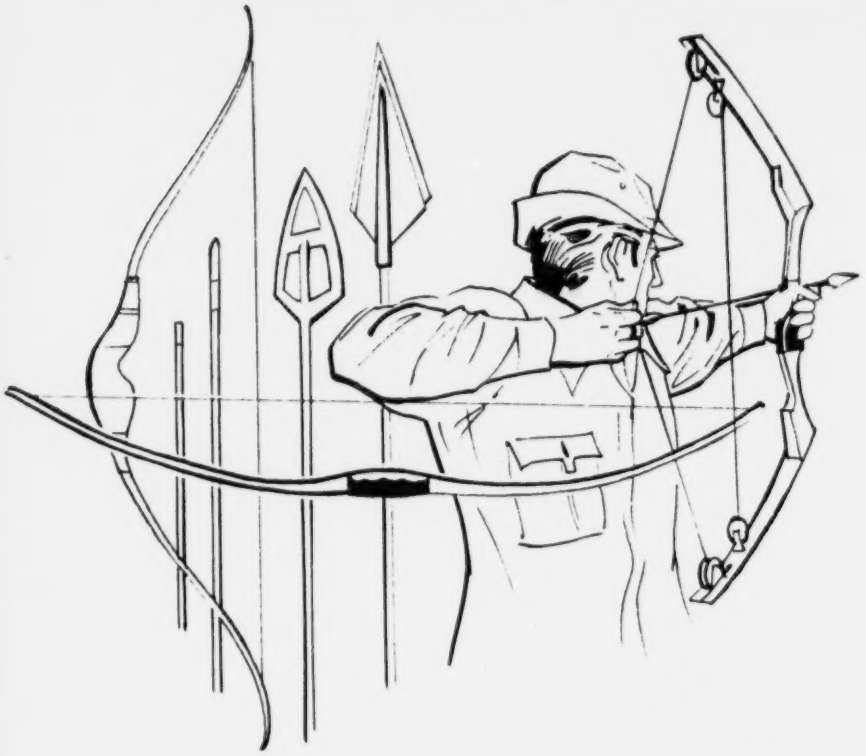
B. PREDATOR IDENTIFICATION
1. Life history of species
2. Direct methods
3. Indirect methods

C. HUNTING METHODS
1. Safety and ethics
2. Where to find predators and how to read sign
3. Best times of day to call - early morning and evening
4. Walk upwind a considerable distance from vehicle
5. Locations for calling and shooting positions
6. Hunting with two or more hunters
7. Call into wind or crosswind
8. Use of calls
9. Duration of calling and pauses
   a. Members of dog family usually come within 30 minutes depending on weather and terrain
   b. Members of cat family may take longer
10. Move a minimum of one mile before continuing to call. Some terrain may require further travel.

D. BAGGING YOUR QUARRY
1. Estimating range
2. Shooting techniques
3. Locating downed game
4. Procedures for quick killing of wounded game

E. GAME CARE
1. Preparation of pelts
2. Shipping pelts
3. Selling pelts
4. Legal considerations

UNIT XII
ADVANCED LESSON 38
ARCHERY EQUIPMENT



references for instructors

content outline	**teaching methods**

A. BOWS
   1. Types of bows
      a. Straight limbed
      b. Recurved
      c. Compound
      d. Target bows
      e. Hunting bows
   2. Bow parts
   3. Draw weights
      a. Straight limbed and recurved bows
      b. Compound bows

B. ARROWS
   1. Arrow parts
      a. Shafts - types and uses
      b. Points - types and uses
      c. Fletching - types and uses
      d. Nocks
   2. Draw length
   3. Spine

C. ACCESSORIES

1. Shooting gloves and finger tabs
2. Armguard
3. Quivers
   a. Bow
   b. Shoulder and hip
4. Strings
5. Sights
6. Releases
7. Arrow rests
8. Others - as needed

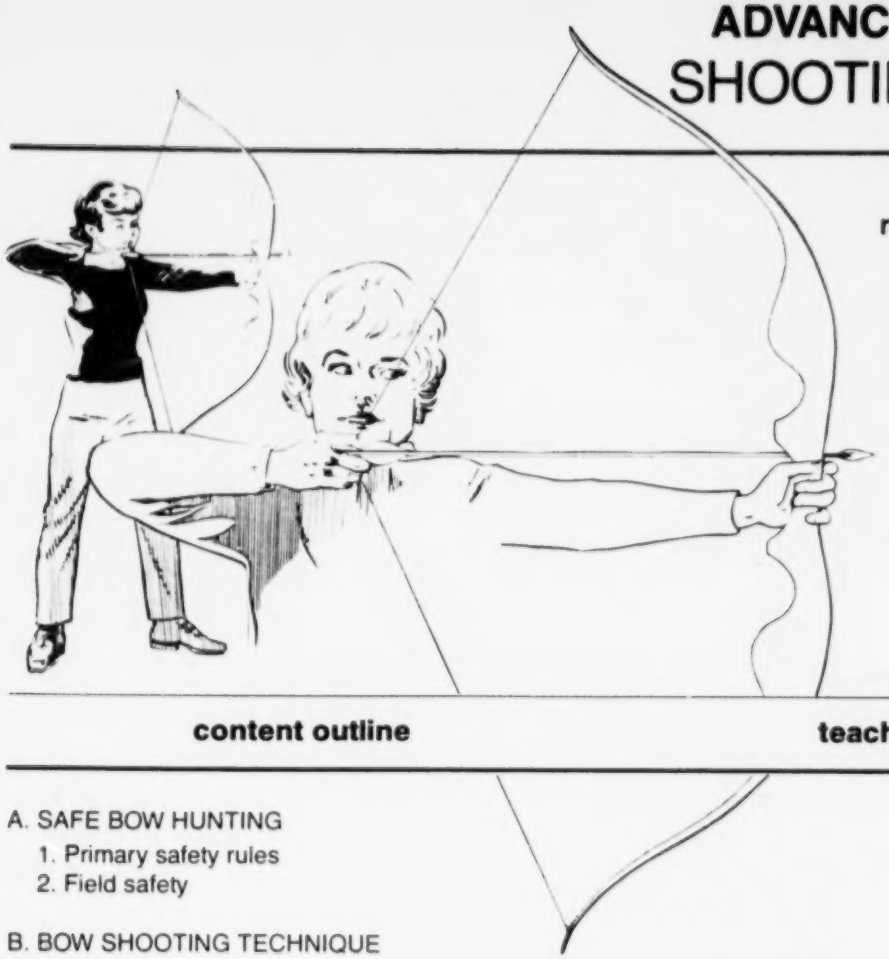
D. CARE OF EQUIPMENT

1. Bows
2. Arrows
3. Accessories

E. STRINGING (BRACING) THE BOW

1. Safety
2. Bow stringers

UNIT XII
ADVANCED LESSON 39
SHOOTING THE BOW



references for instructors

content outline **teaching methods**

A. SAFE BOW HUNTING
   1. Primary safety rules
   2. Field safety

B. BOW SHOOTING TECHNIQUE
   1. Position
      a. Stance
      b. Grip
   2. Nocking
   3. Drawing
   4. Anchor point
      a. High position
      b. Low position
   5. Hold and aim
   6. Release
   7. Follow through

C. AIMING TECHNIQUES
   1. Instinctive
   2. Gap method
   3. Bow sights
      a. Types
      b. Adjustment

D. SCORING TARGETS

E. KEYS TO GOOD SHOOTING
   1. Practice (round and animal targets), range and field conditions
   2. Common errors in bow shooting

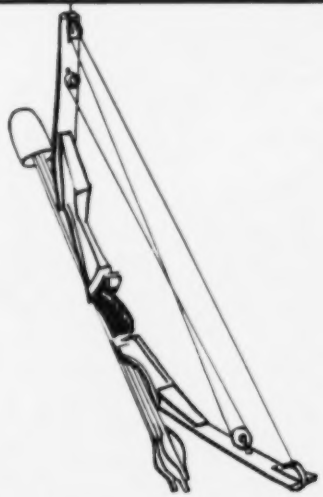
UNIT XII
ADVANCED LESSON 40
BOWHUNTING FOR BIG GAME

references for instructors

content outline	**teaching methods**

A. HUNT PREPARATION

1. Clothing and essential equipment
2. Selecting bow, arrows and accessories
   a. Type of bow and draw weight
   b. Type of arrow and points
   c. Quivers, finger protection and other accessories
3. Practice shooting with field equipment under hunting conditions
   a. Start practice well before the season
   b. Practice in several positions
4. Laws and regulations
5. Landowner's permission
6. Scouting the hunting area



B. IDENTIFYING BIG GAME
1. Life history of species
2. Direct methods
3. Indirect methods

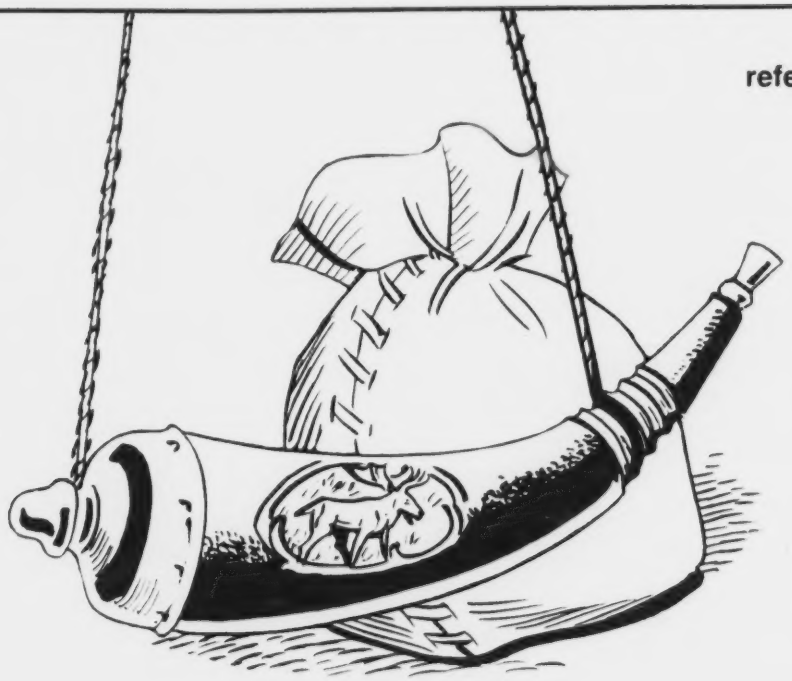
C. HUNTING METHODS
1. Safety and ethics
2. Where to find game and reading sign
3. Stalking techniques
4. Still-hunting
   a. Blinds
   b. Tree stands
   c. Waterholes
   d. Trails
   e. Watching and waiting on ridges, saddles, etc.
5. Calling techniques (if applicable)

D. BAGGING YOUR QUARRY
1. Estimating range
2. Shooting positions and techniques
3. Vital areas
   a. How arrows kill
   b. Arrow placement
   c. Blood sign
4. Tracking

E. GAME CARE
1. Field dressing
2. Transporting to camp and/or home
3. Cooking

F. SURVIVAL AND FIRST AID

UNIT XII
ADVANCED LESSON 41
MUZZLELOADING



references for instructors

content outline **teaching methods**

A. RENEWED INTEREST IN MUZZLELOADING
1. Reasons for popularity
2. History
3. Current activities

B. TYPES OF MUZZLELOADERS
1. Lock systems
2. Originals - safety
3. Modern muzzleloaders

C. TERMINOLOGY

D. POWDERS AND BULLETS
1. Types of black powder
2. Bullet types

E. EQUIPMENT
1. Patches and accessories
2. Powder containers
3. Short and long starters
4. Ramrod and accessories

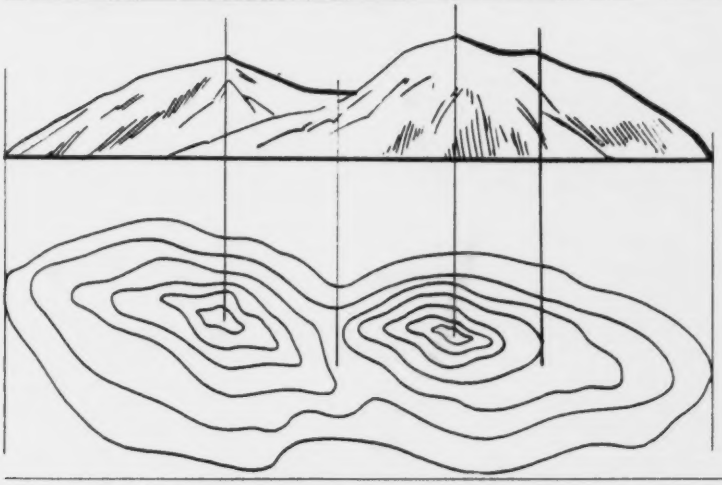
5. Nipple prick and wrench
6. "Possibles" bag
7. Cleaning equipment
8. Useful accessories
   a. Loading block
   b. Cap holder

F. MUZZLELOADING SAFETY

G. SAFE LOADING PROCEDURE
1. Rifles and muskets
2. Shotguns
3. Handguns

H. CLEANING PROCEDURES

UNIT XII
ADVANCED LESSON 42
MAP READING



references for instructors

content outline **teaching methods**

A. MAPS
1. Planimetric
2. Topographic
3. Scales to pick
   a. 1: 250,000
   b. 1: 62,500
   c. 1: 24,000

B. SELECTING A COMPASS
1. Conventional compass
2. Orienteering compass

C. USING A COMPASS
1. Declination
2. Orienting map with compass

D. MAP READING - maps contain:
1. Descriptions (margins)
2. Details (map symbols)
3. Directions (N, S, E, W)
4. Distances (scales)
5. Designations (names)

E. HUMAN OBSERVATION SKILLS
1. Read the environment and map features to contour lines on the map
2. Relate feature on the ground

F. ORIENTEERING GAMES
1. Recreation
2. Hunting skill enhancement
3. Competition

UNIT XII
ADVANCED LESSON 43
SURVIVAL

references for instructors

content outline	**teaching methods**

A. PREPARATION FOR TRIP

1. Plan outings
2. Notify persons of itinerary
3. Carry and know how to use survival gear
   a. Personal
   b. Car
   c. Boat or canoe
   d. Airplane
   e. Snowmobile
4. Never go on extensive outings alone
5. Take enough food including supplies for several days of emergency use
6. Take compass and maps. Know how to use them and orient trip prior to departures.
7. Use proper clothing and equipment. Weather can change; plan for the worst.
8. Know basic survival procedures for constructing shelters, fires, obtaining food and water, signaling, first aid and water emergencies.
9. Proper planning will aid persons to maintain self-control when confronted with emergencies.

B. POTENTIAL EMERGENCIES

1. Getting lost
2. Hypothermia
3. Boat and canoe accidents
4. Land or snow slides
5. Altitude sickness
6. Injuries
   a. Bleeding
   b. Shock
   c. Breath stoppage
   d. Sprains, fractures, dislocations, concussions
   e. Burns
   f. Frostbite
   g. Animal bites

C. MINIMUM EQUIPMENT

1. Map and compass
2. Matches (in waterproof container), metal match or visible supply butane lighter
3. Candle (steric acid or long-burning type)
4. Fire starter (000 steel wool, cotton balls)
5. Whistle, plastic coach type
6. Nylon cord
7. General purpose knife
8. Extra socks
9. G.I.-type signal mirror
10. First aid packet (bandaids, compress bandage, vial of iodine or disinfectant, tape, etc.)
11. Food (condensed high energy food or candy, salt)

D. SURVIVAL KIT

1. Space rescue blanket (lightweight - serves as reflector, both snow and arid country)
2. Wire saw
3. Eight-foot square of clean plastic (tarp, tent, poncho or tube-type plastic tent)
4. Canteen and cup (G.I.-type)
5. Fishing tackle (3 small hooks, 2 flies, 10 yards monofilament line, 2 small sinkers - could carry more of each)
6. Three-foot surgical tubing (drinking tube, slingshot, tourniquet, belt)
7. Survival pamphlet (should include the International Ground-Air-Emergency code)
8. Tissue paper
9. Heavy duty aluminum foil
10. Iodine water purification tablets
11. Metal cup (if you do not have one with canteen)
12. Sunglasses (to prevent snow blindness)
13. Repair tape
14. Snare wire, braided #1

E. VEHICLE OR AIRPLANE SURVIVAL KIT
Everything in the preceding kits only in larger amounts

1. Signaling device
   a. Flares (Smith & Wesson or equivalent), Icarus-day or night, aerial or smoke type
   b. Pengun-type (night adequate, day-type questionable adequacy)
   c. Mini-flare (not recommended, visible only short distances)
   d. Firearm cartridge-type flares, available in various calibers
   e. Military-type (have more than one available)
   f. Read directions on flares carefully before using
2. Food
   a. Dehydrated and easy to prepare food (freeze dried; read directions for preparation before purchasing)
   b. High energy food in addition to that in preceding kit
   c. Instant soup, Tang, hot chocolate (coffee and tea have no food value but do lift your spirits and replace body fluid)
   d. Canned juice in nonrupturable containers
3. Other equipment
   a. Sterno fuel or other heat and cooking device (do not use without adequate ventilation)
   b. Cooking pot (need not be fancier than a coffee can)
   c. Entrenching tool or shovel
   d. Sleeping bag
   e. Axe or hatchet with sheath
   f. Small hand tools (screwdriver, wrench, pliers, etc.)
   g. Personal hygiene requirements (male and/or female)
   h. Other items to suit your individual needs (snowshoes if using snow machine, vehicle spare parts, fan belt, extra oil)

F. PROCEDURES

1. Prevent or care for physical injury
2. Protect self from environment
3. Obtain water and food
4. Prevent exhaustion and/or hypothermia
5. Prepare for rescue

G. TAKE CARE OF YOURSELF AND KEEP CALM

UNIT XII LABS

(hours variable)

Activities

A. Ask The Hunting Experts
B. Hunting Interns
C. Field Trips
D. Hunting With a Camera
E. Interviews
F. Hunting Lore
G. Wildlife Diseases
H. Wildlife Nutrition

APPROACH

The best way for students to learn about hunting is to learn from persons with experience or have experiences of their own. Laboratories in this unit get students involved in hunting or exposed to knowledge, skills, philosophies and behavior of persons with hunting experiences.

ACTIVITIES

A. ASK THE HUNTING EXPERTS - Invite expert hunters to speak in your class. Discuss hunting techniques and ask them to share some of their "secrets" with the class.

B. HUNTING INTERNS - There is no substitute for direct experiences. Students can learn hunting techniques by going out with responsible hunters. Local gun and hunting clubs can assist. Have students prepare an oral or written report.

C. FIELD TRIPS - Visit hunting areas and allow students to check for signs of wildlife. Discuss types of wildlife found in the area. Explain how to "read" the habitat and demonstrate hunting techniques.

D. HUNTING WITH A CAMERA - Discuss hunting techniques and have students "hunt" game animals with cameras. This can be done at most times of the year. Students should keep a log describing their experiences.

E. Give students a list of responsible hunters in the community. Have each student interview a hunter concerning a particular game species. Students report their information in class.

F. HUNTING LORE - Each student or group of students reviews articles and books about hunting selected wildlife. Written or oral reports are prepared.

G. WILDLIFE DISEASES - Invite wildlife managers, veterinarians, or pathologists to speak to the class. They can discuss diseases of wildlife, how hunters can detect diseased animals, precautions to take and management needs.

H. WILDLIFE NUTRITION - Adequate quantity and quality of forage for wildlife is basic to viable populations and development of individuals. Invite state wildlife managers or nutritionists from universities to discuss wildlife nutrition and how it affects basic survival, antler development, survival during critical periods, reproduction and other topics relevant to wildlife and hunters in your area. Learn how hunters can help to provide adequate nutrition for animals and discover ways that hunters have acted improperly in their efforts to influence wildlife nutrition.

Advanced hunting programs

References and notes

APPENDIX A

THE LEARNING PROCESS

*Howard D. Bruner, retired

INTRODUCTION

All teachers, including shooting responsibility instructors, must come to grips with the learning process. After all, students attend classes and complete lessons with the idea that they will learn something. During the teaching task it is important for the instructor to analyze and react to several questions. What is learning? How do individuals learn? What are sound principles of learning that must be employed by the teacher? As a matter of fact, the entire process of teaching and learning must be based upon a strategy that is psychologically sound. It is important, if not basic, to understand that the teacher largely controls what is learned through lesson planning and selecting methods and materials of instruction.

LEARNING

Even though learning is a difficult concept to fully understand, a definition is offered as a starting point. "Learning" is any change in behavior that takes place as a result of an educational experience. The change in behavior is commonly identified by the acquisition of new knowledge, new skills and new attitudes.

PRINCIPLES OF LEARNING

In order to effectively increase the probability of successful learning, selected principles of learning theory are suggested for consideration by the shooting responsibility instructor.

PURPOSE AND LEARNING

Learning must hold purpose for the learner. If the student finds little value in the educational experience, learning is likely to be ineffective. A student seeking a driver's license will value lessons that assist him in seeking his goal. Similarly, a student that wants to gain certification to teach or authorization to hunt will pursue hunter education with zeal. More specifically, if a student desires to shoot a gun with greater accuracy, lessons on the range become more meaningful.

INDIVIDUAL DIFFERENCES

The instructor must be aware of and try to provide for individual differences. Each student brings to the learning experience a different background in terms of physical, emotional and intellectual maturity. It is the responsibility of the teacher to understand these differences and vary the teaching strategy to meet the needs of all students. Pre-tests, checklists and questionnaires on hunting or shooting might be developed to seek out differing backgrounds of students.

ACTIVE PROCESS

Learning by doing has long been championed by outstanding teachers. Students learn more quickly and retain longer those experiences in which they have been directly involved. Painting an oil picture on canvas, operating a typewriter, cleaning a fish and shooting a firearm are examples proclaiming the value of doing - active involvement. Such a learning experience is very likely to enhance student interest. However, it is important to remember that "learning by doing" is not always necessary or even efficient. Most people learn very effectively that rattlesnakes are dangerous without being bitten or handling one. Regardless, whenever you can take students out of the classroom into the field, the learning experience is likely to be enhanced.

PRACTICE MAKES PERFECT

The more frequently the activity to be learned is repeated, the more quickly the activity will be mastered or learned (providing the learner maintains a proper attitude). Learning is enhanced through drill and repetition of skill development followed by application of the skill in the field. Marksmanship training in a classroom followed by range shooting that results in a "bullseye" exemplifies this principle.

LEVEL OF CHALLENGE

The most effective effort is put forth by students when they attempt tasks falling into the so-called "range of challenge" - not too easy and not too hard - where success seems quite possible but not certain. According to some studies, students that experience too much criticism, failure and discouragement are likely to lose self-confidence and weaken their sense of growth.

MOTIVATIONAL FORCES AND LEARNING

Motivation is probably the strongest single force in the learning process. The teaching role, then, becomes one of motivating students.

Motivation defined: Motivation is any action or event that causes behavior to change. It is an inner force or drive that impels an individual to act in a certain way. Motivation isn't anything you can give another person; instead, only the environment and conditions can be provided that ignite the motivational process.

Motivational forces include the following:

Enthusiasm is contagious.

Capitalize on existing interests.

All students have certain basic physical and psychological needs which must be met.

Motivation which originates with the individual is more effective than that which is imposed from without. Self-imposed tasks tend to create more interest than do teacher-imposed tasks.

Reward is more effective than punishment. External rewards sometimes are necessary and effective in stimulating initial interest.

Immediate reinforcement of a desirable response may be helpful in terms of motivating.

A clear understanding of purposes enhances motivation.

Varied teaching techniques and procedures are effective in maintaining interest and motivation.

CONCLUSION

The application of suggested learning principles can be made in lesson planning, selecting appropriate teaching methods and identifying desirable instructional materials. All of the above can contribute toward the development of an effective learning experience for the student.

---

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APPENDIX B

TEACHING METHODS AND TECHNIQUES

*Howard D. Bruner, retired

INTRODUCTION

Many teachers are disturbed and confused by the careless statement, "There is no Best Method." The danger lies in interpreting this to mean that it doesn't make any difference what method a teacher uses. All types of learning cannot be accomplished by one single teaching technique, nor can the interest, attention and involvement of students be maintained solely by one activity. Implementing effective educational experiences requires the skillful guidance of the teacher, equipped with a sound knowledge of the psychology of learning and the ability to apply this knowledge to a wide variety of teaching activities.

Research has established that learning is more acceptable and retained for a longer duration of time if diverse methods of teaching are employed. Consequently, it is the responsibility of the teacher to select the most appropriate method for each topic being presented.

A composite of teaching methods includes the following:

Brainstorming	Interview
Buzz Sessions	Lecture
Case Studies	Panel Discussion
Debate	Projects
Direct Experience	Questioning
Discussion	Recitation
Drill	Role Playing
Field Trips	Skits
Games	Guest Speakers

A detailed description of three widely used methods is provided as an introduction to the study of teaching techniques.

THE LECTURE

In spite of constant admonishments that teachers are not to lecture to their students, the technique is widely used. This method of teaching has been grossly abused by many teachers and their students have suffered; but, correctly used, it is functional.

There is a difference between formal lecturing and informal lecturing or "teacher talks." The short informal lecture can be used to good advantage in introducing a unit, summarizing a problem for study, providing information difficult for students to find, supplying motivation, or sharing one's cultural experiences with the class.

HOW TO MAKE THE LECTURE EFFECTIVE

The teacher talk or informal lecture can be made more effective by giving attention to the following suggestions:

Lectures for young people should usually be short. One of 15 or 20 minutes is possibly the maximum; in most cases five or ten minutes may be better.

The approach to the lecture should be informal. The language should be clear and simple, not stilted. The purpose is to inform, enrich and motivate.

Lectures should be tailored to people. Teachers are inclined to use words beyond the students' backgrounds, knowledge and skills.

Lectures should not rehash textbooks or other material the students have read or should read for themselves.

Lecturers should avoid discourses on trivial personal incidents.

Lectures should be planned and organized so that they do not digress. In the main, teachers should announce their purpose at the beginning of lectures. Lecture development should then stick to the theme. The exact purpose of the talk must not be forgotten as it develops.

Talks should be replete with verbal illustrations. Illustrations can accent abstract ideas.

Frequently, lectures are improved if supplemented by simple visual aids such as specimens, flat pictures or chalkboard sketches.

The relatively long lecture should include a summarization at its close.

QUESTIONING

Although the traditional teaching formula - assign, study, recite, test - has fallen into disrepute, the use of questions is another matter. It is part of the instructional method, but it is more than that. It is a useful art or tool and, in the hands of a skillful teacher, serves numerous useful learning purposes. Good questions stimulate thought and encourage students to question themselves against which the correctness or acceptability of ideas may be tested; they promote the aims of the lesson in a concise manner; and they encourage discussion.

TECHNIQUE FOR GOOD QUESTIONS

The following are characteristics of good questioning technique:

Questions should be worded in clear, concise and suitable terms to fit the abilities and background of the students.

Key questions should be prepared in advance. This practice will assist the teacher in placing emphasis on major points of the lesson.

A friendly, informal and conversational manner of questioning encourages participation. The teacher is not the inquisitor trying to find out what the students don't know.

Strive for involvement by distributing questions to all students. Don't allow a few students to dominate class interaction.

Caution should be used in the selection of questions that require one word or simple recall responses. Such a practice is likely to develop a rather fragmented discussion.

Don't press the issue of a student's response to a question to the point of embarrassment. Exhortation to think will not bring back a forgotten lesson.

CLASSIFICATION OF QUESTIONS

There is a system which classifies questions into the following four categories:

Recall: narrow questions calling for facts or other recall items and involving rote memory. They are at the lowest intellectual level.

Convergent: calls for the analysis and integration of given or remembered data. Problem-solving and reasoning are often involved in this category.

Divergent: questions that call for answers which are creative and imaginative and not empirically provable. Many different answers may be correct, and therefore, acceptable.

Value: questions that deal with matters of value judgements and choice. These call for an opinion.

PROJECT "METHOD"

A project is a natural, lifelike learning activity involving the investigation and solving of problems by an individual or small group. Ideally it should consist of a task in which the pupil sets out to attain some definite goal of real value to him. As originally visualized, this goal seems to have been something tangible. Although this connotation is perhaps no longer essential, projects frequently involve the use and manipulation of physical materials and result in tangible products. Projects are typically hands-on experiences that are highly motivational.

PROJECT METHOD STEPS

Common steps include the following:

Selecting the Project: The student is encouraged to select a project that will assist in achieving the objectives of the lesson and one in which he finds a special interest. The teacher should guide the student in the selection of a suitable project. On occasions the teacher may need to stimulate the selection process by providing a list of alternative projects from which to choose.

Planning the Project: It is necessary for the student to prepare a plan showing the steps from initiation to the completion of the project. Such a plan can provide such things as cost estimate, necessary materials and an estimate for a completion date. Planning provides the student with a realistic picture of anticipated challenges and problems.

Executing the Project: Once the project is selected and planned the student is ready to actively proceed with its production. The role of the teacher is to guide the student in applying skills and making decisions. Care should be taken by the teacher not to be too solicitous and thus stifle the initiative and ingenuity of the student.

Project Evaluation: The last phase of the project method is evaluation. The teacher should provide feedback to the student in terms of skills and competences employed in the completion of the project. Evaluation criteria should encompass both process and product.

CONCLUSION

There are three distinct methods of teaching: (1) the lecture, (2) the recitation-discussion method and (3) the project and problem method. Within each method, many variations are possible. Rarely does a teacher use one method to the exclusion of all others.The objectives of the teacher are important determinants in the selection of teaching method.

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APPENDIX C

LESSON PLANNING

*Howard D. Bruner, retired

INTRODUCTION

Competent teachers know *what* they are going to teach, *why* they are going to teach and *how* they are going to teach. The effective instructor must make appropriate decisions in response to these questions. There is no substitute for good planning. Plans will assist the teacher in making efficient use of time and will provide aim and direction for teaching. There is no magic formula for developing lesson plans and teachers must search for the planning design that suits their teaching style.

Lesson planning enables teachers to predict the future course of events. In essence, a plan is a blueprint - a plan of action. Such a blueprint provides the teacher with guidelines for action while teaching a course. The levels of planning are:

The course plan (see example, page 224)
The unit plan (see example, page 225)
The daily lesson plan (see example, page 226)

COURSE PLAN

The process of planning begins when an instructor sets out to determine what major ideas or concepts will be emphasized during the course. All available instructional resources and guides should be surveyed to determine the long-range plan of action.

Although teachers differ in the format of a course there is considerable agreement on the essential ingredients.

COURSE OBJECTIVES

A statement of general course objectives should be prepared. This statement should provide a guideline for the development of other aspects of the plan. Objectives should be stated in terms of student behaviors and the established conditions of the educational experience.

CONTENT OUTLINE

An outline of subject content to be used during the course should be prepared. The amount of detail in the outline should be determined by the teacher. The outline of topics to be studied provides a basis for the student's achievement of the predetermined objectives. Material in the outline can provide the teacher with valuable information necessary for establishing time constraints for the course.

INSTRUCTIONAL RESOURCES AND FACILITIES

It is neither necessary nor desirable to list in the course plan all instructional resources and facilities to be used. However, those items that need to be scheduled a long time in advance should be identified. Such resources included in the long-range classification are film, video tapes, resource people, field trips and laboratories such as the rifle range. Advance notice of such resources insures their availability when a specific topic is being presented.

ASSESSMENT OF TIME

The teacher must make some estimate of time for each unit or topic included in the course being taught. The time line is not intended to be a rigid confinement but acts as a guide to assure involvement by the class in all major activities.

STUDENT EVALUATION

Finally a plan of action needs to be developed that evaluates the growth and achievement of students taking the course. Written tests, checklists, rating scales and performance tests are examples of evaluation tools.

SUMMARY COMMENTS ON THE COURSE PLAN

The plan should be flexible and used as a guide, not a straightjacket. The plan should not restrict the teacher; instead, it should provide teaching alternatives.

It will be necessary for the teacher to frequently establish priorities in the selection of topics and activities to include in the course. All too often there is too much material to cover in the designated amount of teaching time.

The course plan, when written down, provides a basis for future planning. Topics can be altered, time estimates changed, new resources added. Long-range planning provides for improvement in the effectiveness of teaching.

UNIT PLAN

Most courses of study (course plans) are organized into units, blocks or topics. These are usually identified in the content outline in the long-range plan. The selection, preparation and implementation of the units constitute the major thrust of the teacher's instructional strategy. In essence, the unit plan comprises the coordination of subject matter, teaching activities and instructional resources directed toward the achievement of determined objectives. The primary reason for unit planning is to develop educational experiences that hold together and integrate, rather than being isolated one from the

other. The unit plan had been defined as a procedure for organizing subject matter, teaching techniques and instructional resources into a unified learning program. The strategy of the unit is to assist students in their quest for understanding concepts, solving problems and developing skills and attitudes.

PLANNING THE UNIT

Planning a teaching unit is a relatively simple task. However, it is time consuming and may become somewhat frustrating for the beginning teacher. In general, the planning strategy of a unit can be reduced to the following steps:

Select the unit problem, topic or theme.

Develop a comprehensive set of objectives for student achievement.

Prepare outline of subject content.

Select activities for student involvement:
initiatory or introductory activity
developmental activities
culminating activities

Prepare list of resources and references related to content and activities.

Develop evaluation procedures based upon unit objectives.

UNIT STRATEGY

Good teaching units do not just happen. Considerable time and study are involved in the investigation of the unit topic, the uniqueness of students' backgrounds and the discovery of appropriate resources and activities. If units are to be productive and challenging, strategies need to be developed that involve the student at the very beginning.

The design for planning strategies might very well be the preparation of the *initiatory phase*, then the *developmental phase* and the *culmination of the unit*.

The **initiatory phase** serves several purposes: to determine what the student already knows about the unit; to discover student backgrounds, interests and abilities; and to motivate students to pursue the unit of study. Examples for initiatory activities are: showing films, using a resource person, planning a buzz session or giving a pre-test.

The **developmental activities** are the center of student involvement and it may be rather artificial to separate this aspect from the initiation phase. The activities need to vary and be extensive as they constitute about everything the students do to achieve established goals and objectives. The developmental phase provides an opportunity for the teacher to design activities that relate to the topic or problem and maximize individual student development.

Culminating activities are designed to summarize, to review, to re-emphasize the central theme and to evaluate the effectiveness of the instructional activities. Examples appropriate to this phase: exhibit or display students' work, examination, panel discussion, tournament committee, reports, shooting competition.

DAILY LESSON PLAN

Now that we have discussed the basic structural organization for course and unit planning, we can examine the procedures for culmination of the teaching strategy, namely, preparing daily lesson plans. Effective, productive learning experiences do not just happen. They are usually the product of extensive efforts by the teacher. Even those interactions that may appear least structured and open-ended are usually the result of detailed planning. Each lesson must be planned and structured so that it provides the teacher with a plan of action designed to assist students in the attainment of instructional objectives.

Purposes of daily lesson plans include the following:

They insure efficient handling of classroom routine (attendance, collection of assignments, distribution of instruction materials, seating, room arrangement).

The teacher is provided with an organizational pattern of subject material to include, thus making available an up-to-the-minute recall of the lesson content. Plans insure the availability and use of necessary instructional materials (flipcharts, pictures, models, etc.).

They provide for efficient use of class time.

Lesson plans become the basis for improving future lesson strategies.

ESSENTIAL PARTS OF THE DAILY PLAN

It would be misleading to infer that all daily lesson plans have identical organization: They are as varied as the teachers who use them. A number of educators feel that teachers should be allowed a large measure of freedom in developing daily lesson plan forms and in using such forms to prepare daily lesson plans. It is

APPENDIX C

imperative, however, that the teacher give attention to the following:

Specific Objectives - A set of specific objectives should be prepared in terms of desired student behavior. The objectives provide aim and direction for the teacher and student as the lesson is being completed.

The Introduction - The teacher should devote some time to planning the introduction of a lesson. The introduction focuses the attention of the class on the topic. It should offer a challenge, develop interest, set the stage and arouse curiosity in pursuit of the lesson. A demonstration, anecdotal story or a visual aid could be used by the teacher as a vehicle for introducing the lesson.

Lesson Development - This aspect of the lesson plan includes an outline of the subject to be presented and a listing of related activities and instructional resources. The developmental phase provides structure for the teacher to follow in pursuing the intended objectives and continuity among planned activities. Clues are provided for the teacher in the *Teaching Methods* section by suggested anecdotal comments, questions, definitions, visual aids and statistical information.

Lesson Summary - At the close of a lesson it is very important to review the major ideas presented during the class period. This kind of culminating activity provides the teacher with an opportunity to make learning more permanent by repetition. Also, it provides feedback regarding the students' understanding of knowledge and concepts presented.

Teacher Comments - Teachers can analyze their lesson and make comments for change. Improvements for future lessons can be noted.

CONCLUSION

Lesson plans should be simply stated, clearly written, and flexible. But the following rules form better criteria against which to judge a lesson plan:

1. The teacher should be able to teach from it.
2. Someone else qualified in the subject area should be able to teach from it.
3. It should be useful as a basis for improving the lesson when taught sometime in the future.

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COURSE PLAN EXAMPLE

Subject Title (course) _____

_____

Course Objectives _____

_____

_____

Time Estimate	**Content Topics**	**Activities/Resources**
Use calendar dates to assist in resource procurements	Units Topics Problems	Referrals for facilities and resources needed in long-range planning (*i.e.*, film, field trip, facilities)

Evaluation of the Course Plan (*e.g.*, written tests, performance tests, rating scales, etc.) _____

_____

_____

_____

Suggestions:

1) Estimate time and number of class sessions.
2) Allow for flexibility.
3) Provide time for mechanical details associated with opening and closing of course. (Registration, testing, graduation, etc.)

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UNIT PLAN EXAMPLE

Grade Level _____ Name _____

Subject _____

Class Size & Description _____

I. Unit Purpose

Introduce the unit of work.
Briefly describe content and procedures followed in the unit.

II. Unit Objectives

Statement of desired behavioral changes.
Provide aim and direction to teaching.

III. Unit Development

Outline subject matter. Organize material into logical steps. Include topics, major concepts and necessary sub-topics.	Indicate anticipated methods and techniques to be used in the class. Specifically suggest student activities and teacher activities. Describe activity or technique as it parallels subject matter (Examples: lecture, demonstration, discussions, reports, drill).	List the resources used to cover assigned topics and problems. Provide information on *what* the resource is and *how* it is obtained. List the title and pages when appropriate (Examples: books, film, recording, resource person, etc.).
Topic	Suggested method or technique.	Appropriate resource reference.
Topic	Suggested method or technique.	Appropriate resource reference.

IV. Evaluation of Students (culminating activity)

Describe the procedures for bringing the unit to a conclusion. An awareness of growth and development by students should be stressed in completing the unit of study (Examples: debate, unit test, tournament, exhibit, science fair).

V. Teacher Evaluation of Unit

The effectiveness of each teaching unit should be determined by the teacher after the completion of the unit.

DAILY LESSON PLAN EXAMPLE

Subject _____ Date _____ Period _____

Topic _____

References (textbook, paperbacks, etc.) _____

_____

_____

Supplementary Materials (films, firearms, visual aids, etc.) _____

_____

_____

Daily Objectives (specific objectives) _____

_____

_____

content	**teaching methods, techniques and instructional material**
I. **Introduction** (approach): Outline of subject matter necessary for introducing students to lesson	Identify and briefly describe techniques to focus attention and motivate students for new material.
II. **Lesson Development:** Outline of new subject material to be covered: Major topics & sub-topics New concepts Definitions Explanations (Detail dependent upon individual teacher needs)	List appropriate procedures and activities for involving student in the lesson: Planned activities (drills, panels, reports, field trips, etc.) Use of instructional materials (16 mm, overhead, 35 mm, opaque, hook-loop board) Key questions
III. **Summary** (conclusion): Major concepts covered	Techniques to be implemented in the summary: Reports Questions Chart
IV. **Assignment:** New material to be covered (references, pages) (not always necessary)	Suggested motivational procedures

V. **Teacher Comments:**
(comments on effectiveness, problems encountered and suggestions for revision.)

APPENDIX D

VISUAL AIDS *Douglas L. Gilbert, deceased

INTRODUCTION

Visual aids... are exactly that, "an aid, through visual perception, to any effort of communications." Visual aids are used to increase the possibility of getting a message across and accepted. Visual aids cannot replace good writing or speaking; they are in addition to, not instead of.

REASONS FOR USING VISUAL AIDS

One cardinal rule in achieving good communications is to have the audience use as many senses as possible. Visual aids, be they pictures, models, slides or whatever, employ the use of additional senses or allow actual participation and involvement on the part of the individual. Achieving understanding is the overriding reason for using visual aids.

Other values of visual aids are many. They create and retain interest. The average person needs to be attracted. We must have an audience, readers or viewers, to work with. For example, slide shows and motion pictures are more attractive to the average person than a straight lecture. Or a picture story will attract and be read by more people than one of straight prose. After initial interest, attentiveness needs to be maintained. Clarity and ease of explanation are aided with good visuals. Closely allied to clarity is the advantage of retention of ideas by the audience. A good chart, cartoon or photo will be remembered long after the words are forgotten.

The last reason for using visual aids is that they are an excellent outline for the speaker to follow during a presentation. If the slides are in proper sequence or charts in logical order, the oral presentation also will be in proper arrangement.

TYPES OF VISUAL AIDS

Normally, the **actual object** being discussed is the best visual aid to use. However, there are many times when the actual object isn't suitable for use. It may be too big, such as a shotgun shooting range. Or, it may be too small, such as a round of ammunition.

Models can be used to increase or decrease size and to show working parts. A model of a primer can be made large enough so every one within a reasonable distance can see. The trap range can be shown as a scaled-down model. Models can be constructed so segments can be removed, and they also can be animated.

Active graphics are visual aids, such as flannel boards or "hook and loop" boards, where the visual is built up or put together as the talk progresses. Other examples are the chalkboard, bar graphs with movable bars, news pads or the ferriergraph where the material is uncovered as the presentation progresses. The use of color and caricatures makes active graphics more effective.

Projected images (slides, motion pictures and overhead projection) are probably the most popular visual aids for shooting and hunter educators. Color, sound and size can be controlled. Like other visual aids, however, they should be an aid to the presentation and should be of high quality. A motion picture should never be just "shown." There always should be an opportunity for questions and answers at the end, and the film should be properly introduced. Slide shows can be good or bad, depending upon the quality of materials, planning involved and the ability of the speaker. A preview should be routine; there is no excuse for upside-down slides or slides out of sequence. The overhead projector is especially good for small audiences in lighted rooms. With the overhead, the speaker can face the audience.

Static graphics are usually the least effective visual aids. These are the maps, charts, graphs or photos that have no movable parts. They should be simple, bold, colorful and of appropriate size.

Of course, visual aids can be used in combination. For example, an overhead projector often is used with several overlays in combination with an active graphic. There is no reason why more than one type of visual aid can't be used in a single presentation.

STEPS AND GUIDELINES IN DEVELOPING VISUAL AIDS

A person should have an important message and objectives should be definite. This is the first step.

Second, it is well to outline the message with the most important points as main headings. The outline also will serve to organize the presentation in a logical sequence.

The last step is to select the aid which will best visualize important points. Many times the actual selection will depend on budgets, time, materials available and abilities of people involved.

It is well to mention that a person should not use visual aids just to be using them. Too many can clutter. They should serve a purpose and always be of excellent quality.

Size has been mentioned several times. Simply stated, the visual aid must be large enough. Why show something if it can't be seen? It should be kept simple, yet be colorful and appealing. Pictures, cartoons and color all help if used correctly.

Generally, there should not be more than six or seven words per line or six or seven lines per visual. Letters should have balance; in other words, be heavy enough but not too heavy, and of one style. For making slides from a standard 8½ X 11-inch sheet of paper, letters should be at least ¼-inch high. The width of letters should be approximately ¼ their height. For slides showing charts or graphs, letters ¼-inch high can be easily seen at a projected distance of 8 feet; ½-inch at 16 feet; 1 inch at 32 feet; 1½-inches at 48 feet; and 2-inches at 64 feet; line spacing should be about 1½ as much as the height of the letters.

Colors can add to, or subtract from, any visual aid. Light colors make things appear wider and larger. Dark colors give the object the appearance of being smaller and narrower. Generally, the smaller the visual aid, the brighter the colors should be. Usually, two to three colors are enough for one visual aid. Black denotes formality, richness or strength. Green gives the feeling of freshness or youth, while orange is a gay, warm color. Blue is cool and gives a melancholy feeling to most people. Red is the color to use for anger, hate, love or heat. Yellow denotes ripeness, lightness or warmth. White is the color to use when depicting purity, cleanliness or neatness.

Backgrounds are important. Gray or some other low-contrast color is excellent for most work and especially necessary for visual aids to be used on television. Greater contrast may give the best effect in an average exhibit or presentation. Green on white and red on white are good examples.

SELECTING THE VISUAL AID

Which visual aid should be used? This depends upon the subject being discussed, the time and the budget available, the quality of materials on hand and the ability of the person making the presentation.

If suitable, the best visual is the actual object. A set of bullets that can be closely examined is the best way to learn about types of bullets. One bullet, however, would not be large enough for a group to see. Instead, it may be wise to use a model, slides or a graphic type of visual aid. Live wildlife can't be brought into the room, but good visual aids can be used to show characteristics for wildlife identification.

For a poor speaker, a good motion picture may be the best approach. A dynamic, forceful, capable orator should use this ability to the best advantage and not follow a script or let a canned presentation do the talking for him.

USING VISUAL AIDS

The visual aid should not be shown to the audience before the speaker wants them to look at it. Charts, graphs, models, projected materials, handouts and all other aids should not be made available until being discussed or explained. Otherwise, the audience will be trying to interpret the visual instead of listening to the speaker.

Again, visuals should be large enough so that all in the room can see them with ease. Too often the speaker will remark, "You can't see this, but..." If it can't be seen, don't show it!

A wooden or flashlight pointer should be used to direct attention to the specific item being explained. Care should be taken not to obstruct the view of those in the audience.

CONCLUSION

In giving a presentation or writing a story, it just makes good sense to do the best job possible. The possibility of this coming about can be greatly enhanced by correctly using well-planned and well-constructed visual aids.

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APPENDIX E

SHOOTING POSITIONS CHECKLISTS

Appendix E contains checklists for fundamentals of rifle, handgun and shotgun shooting. Instructors can use these lists in at least two ways. First, use checklists during classroom sessions when teaching about shooting positions and techniques. The second use is during range shooting exercises. Checklists will remind instructors and coaches about shooting positions, techniques and common errors that shooters might make.

All checklists describe the "standard" shooting positions for righthanded shooters. Instructors are responsible for adapting standard positions to meet each student's needs.

RIFLE SHOOTING CHECKLIST

A. PRONE POSITION
1. Body at 5 to 15° angle to target
2. Trunk of body straight with shoulders level
3. Left leg in line with left side of body, relaxed, toe pointed in
4. Right leg bent, relaxed
5. Left elbow under rifle, left hand relaxed
6. Sling adjustment
7. Right elbow spread to form tripod, right hand has firm grip (*not* tight)
8. Gun butt in pocket of shoulder
9. Head erect

B. SITTING POSITIONS
1. Body at about 30° angle to target
2. Trunk of body straight with shoulders level
3. Leg muscles should not be tense
4. Elbows over knees
5. Left elbow under rifle, left hand relaxed
6. Sling adjustment
7. Right hand has firm grip (*not* tight)
8. Gun butt in pocket of shoulder
9. Head as erect as possible
10. Crossed-legs position
    a. Outside of each foot on ground
    b. Reverse cross to adjust position
11. Crossed-ankles position - reverse cross to adjust position
12. Open-legs position
    a. Feet well spread
    b. Heels braced on ground

C. KNEELING POSITIONS
1. Body at about 45° angle to target
2. Trunk of body straight with shoulders level
3. Right knee spread for solid base
4. Left knee supporting left arm (2 or 3 inches above elbow)
5. Left elbow under rifle, left hand relaxed
6. Sling adjustment
7. Right arm in comfortable position, right hand has firm grip (*not* tight)
8. Gun butt in pocket of shoulder
9. Head erect
10. High position
    a. Left foot directly under left knee
    b. Sitting on heel/kneeling roll
11. Low position
    a. Left foot extended forward
    b. Right leg flat on ground with foot flat and rotated inward

D. STANDING POSITION (NRA)
1. Body at about 90° angle to target
2. Feet about shoulder width apart
3. Bend back at waist
4. Legs straight - knees *not* locked
5. Left elbow under rifle, supported by body or hip
6. Left hand spread or in a fist
7. Right elbow low or raised slightly
8. Right hand has firm grip (*not* tight)
9. Stock elevated to cheek and back to shoulder
10. Head erect

E. NATURAL POINT OF AIM - shift entire position

F. SHOOTING TECHNIQUE
1. Breath control
2. Relaxed position
3. Aiming - eye relief
4. Trigger squeeze - finger placement on trigger not past first joint, trigger finger not touching wood on small of stock
5. Follow through
6. Calling shots
7. Concentration

G. COMMON ERRORS (ALL POSITIONS)
1. Rifle canted
2. Improper sling adjustment
3. Unnatural breathing
4. "White-knuckle" grip with hands (too tight)
5. Muscles tense
6. "Squirming" when in position
    a. Moving elbows
    b. Shifting gun butt position

7. Incorrect placement of trigger finger
8. Trigger jerk - flinching
9. Failure to follow through

HANDGUN SHOOTING CHECKLIST (NRA POSITION)

A. GRIP
1. Grip as high as possible on frame
2. Handgun fits into "V" formed by thumb and first finger
3. Heel of hand behind handgun grip
4. Trigger finger placed on trigger at about first joint (ready to shoot)
5. Thumb lies horizontally along frame
6. Remaining fingers firm around handgun grip (*not* tight)

B. SHOOTING POSITION
1. Body at 60 to 90° angle to target
2. Body erect and relaxed, shoulders level
3. Feet about shoulder width apart
4. Weight evenly distributed on both feet
5. Legs straight - knees *not* locked
6. Right arm fully extended, elbow straight but *not* locked, wrist locked
7. Left hand in pocket or belt
8. Head erect

C. NATURAL POINT OF AIM - shift rear foot

D. SHOOTING TECHNIQUE
1. Breath control
2. Relaxed position
3. Aiming - concentrate on front sight
4. Trigger squeeze
5. Follow through
6. Calling shots
7. Concentration

E. COMMON ERRORS
1. Improper grip - too tight, thumb locked down
2. Changing grip
3. Improper trigger finger position
4. Locked knees
5. Locked elbow or bent arm
6. Wrist not locked
7. Trigger jerk - flinching
8. Anticipating or hurrying shots
9. Failure to concentrate
10. Failure to focus on front sight (looking at target)
11. Failure to follow through

SHOTGUN SHOOTING CHECKLIST

A. STANCE
1. Relaxed and balanced (boxer's stance)
2. Body and feet arranged so that shotgun points where target will be shot
3. Feet about shoulder width apart
4. Left leg advanced, left knee slightly bent
5. Left foot pointed toward area where target will be shot
6. Right leg straight
7. Body leaning slightly forward
8. Head erect

B. MOUNTING (SHOULDERING)
1. Left arm in natural position
2. Left hand about midway on forearm and relaxed
3. Right elbow out at nearly 90° angle while swinging
4. Right hand with firm grip (*not* too tight)
5. Bring stock *to* cheek, then gun butt back to shoulder
6. Gun butt in pocket of shoulder
7. Insure gun fits shooter

C. SHOOTING TECHNIQUES
1. Breathe normally
2. Swinging movements smooth and continuous
3. Pointing, not aiming (look at the target)
4. Trigger "slap"
5. Follow through

D. COMMON ERRORS
1. Failure to follow through (most common error)
2. Lifting cheek off stock as gun is fired
3. Aiming the shotgun
4. Erratic swing
5. Bringing cheek to stock
6. Improper seating of gun in pocket of shoulder
7. Tenseness (check grip)
8. Failure to concentrate
9. Improper body and foot position - not pointing where target will be shot
10. Improper stance
11. Left hand too far out on forearm
12. Right elbow down while swinging

APPENDIX F

OVERHEAD TRANSPARENCIES

Certain LESSONS call for preparation of overhead transparencies. **APPENDIX F** contains illustrations to be used to produce these transparencies. Instructors can make transparencies by running the illustrations through a "thermofax" machine. Contact schools in the area to locate "thermofax" equipment available for your use.

Each illustration in this section has a number and title which correspond to numbers and titles specified in the **teaching aids** sections of some LESSONS. Illustrations and brief comments about their contents are as follows:

1. Learning = Behavioral Change: Learning is commonly identified by the acquisition of new knowledge, new skills and new attitudes.
2. How Do We Learn?: The five senses are all used in the learning process. Sight is the primary sense used for learning.
3. Purpose: Each student needs a reason to learn. If students find little value in an educational experience, learning is likely to be ineffective.
4. Individual Differences: Each student brings to the learning experience a different background in terms of physical, emotional and intellectual maturity.
5. Active Process: Students learn more quickly and retain longer those experiences in which they have been directly involved.
6. Practice Makes Perfect: The more frequently the activity to be learned is repeated, the more quickly the activity will be mastered or learned.
7. Level of Challenge: Students put forth more effort when they attempt tasks falling into the so-called "range of challenge" - not too easy and not too hard - where success seems quite possible but not certain.
8. Motivation: Motivation is probably the strongest single force in the learning process. The teaching role is one of motivating students.
9. Retention of Information: Learning is more effective and information is retained longer if diverse teaching methods are used. Retention increases when seeing and hearing are combined and when students become directly involved in the learning process.
10. Levels of Experience: Teaching methods can provide students with various "levels of experience." Combine abstract and concrete experiences by using diverse teaching methods.
11. Planning Levels: Each level of planning (course, unit and daily plans) provides guidelines for action while teaching a course. There is no substitute for good planning at all levels.
12. Daily Lesson Plan: Lesson plans vary in organization, but all plans should give attention to topics shown on this illustration.
13. Case Types: Cartridge cases for rifles and handguns come in several styles. Common types are illustrated.
14. Headspace: Rimmed case (top) headspaces at the rim while rimless case (bottom) headspaces at the shoulder of the case. Several other headspacing systems exist.
15. Primers: Components of American Boxer (top) and Berdan (bottom) primers are illustrated.
16. Bullet Shapes: Basic bullet shapes for handguns and rifles are shown in this illustration. Several other shapes are available.
17. Jacketed Bullets: Three types of jacketed bullets are illustrated.
18. Cast Bullets: Common parts of cast bullets are shown in this illustration.
19. Shot Sizes: Lead shot comes in various sizes which are numbered according to the system shown in this illustration.
20. Sights: Sight alignment and picture with open, aperture and telescopic sights are illustrated.
21. Shot Groups: Shot groups must be "tight" before sights are adjusted. Poor and "tight" shot groups are illustrated.
22. Habitat Triangle: Food, shelter and water are the essential ingredients of any habitat. For animals to occupy a habitat, each ingredient must be of good quality, properly situated in relation to the other ingredients and in ample supply.
23. Ecological Succession: Over time, bare soil may support a mature forest through stages of natural aging.
24. Habitat and Wildlife Changes: As landscapes change through ecological succession, new habitats develop. Consequently, their composition of animal species also changes as food, shelter and water become available in different quantities and qualities, and in new arrangements.
25. Threatened and Endangered Species: Primary causes of 114 wildlife species being designated as threatened or endangered in the United States, in

1976. Species are added or removed from these categories in response to changing statuses of their populations. Regulated hunting for sport has not caused any species to become threatened or endangered.

26. Population Bathtub: Carrying capacity of a habitat is similar in principle to the water-holding capacity of a bathtub. Births and immigrations add animals to a habitat. Deaths and emigrations remove animals. A population balance is achieved when the number of animals entering a habitat equals the number leaving.

27. Population Growth: Animal populations have the potential of growth to extremely high numbers. A population of robins in a backyard would be astronomical in five years without normal losses to death and outward movement.

28. Biological Surplus: When carrying capacity of habitat is approached, reached or exceeded, harvesting is an important management tool. Hunting and trapping can remove some of the biological surplus that otherwise would be lost to various death factors and social pressures. They also protect habitats from overuse by too many animals, and they provide recreation, food and other benefits to the harvester. Furthermore, money from sales of hunting and trapping licenses is the primary source of support for wildlife and habitat management throughout North America.

29. European Hunter Training: Basic content for hunter training courses in central European countries is listed. Courses normally require 15 through 20 hours of lecture with ample take-home reading. Would-be hunters must pass written and oral exams, and serve an internship.

NOTE: To prevent "strike through"* when making Xerox copies *and especially for transparencies on clear films*, put a black piece of paper *behind the original.*

* "Strike through" is when some of the printing on the *opposite* side of the original is inadvertently copied.

It is suggested that you can obtain color marking pens for transparencies to add visual effectiveness to your presentation. For example, color in clothing, grass and foliage, earth, sky and wildlife. *For best results, be sure to get marking pens specifically designed for overhead transparencies* that do not smear easily. Most audio-visual suppliers carry such brands as *Schwan STABILO* or *Sanford's VIS-A-VIS*. As many as eight basic colors are on the market with thin points and four colors with wide points.

NEW KNOWLEDGE

NEW SKILLS

NEW ATTITUDES

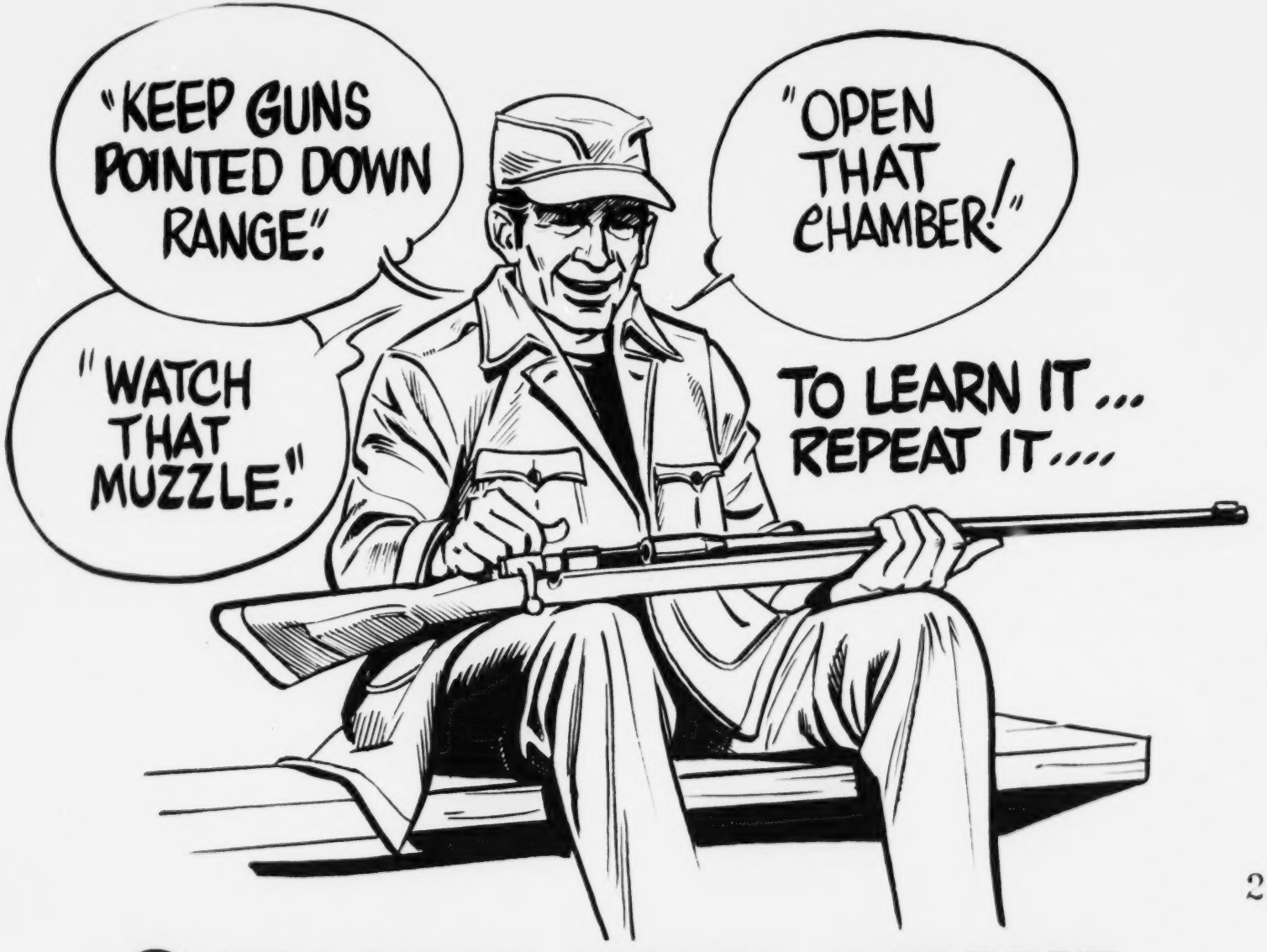
❶ LEARNING=BEHAVIORAL CHANGE

❷ HOW DO WE LEARN?

❸ PURPOSE

4 INDIVIDUAL DIFFERENCES

5 ACTIVE PROCESS



6 PRACTICE MAKES PERFECT

❼ LEVEL OF CHALLENGE

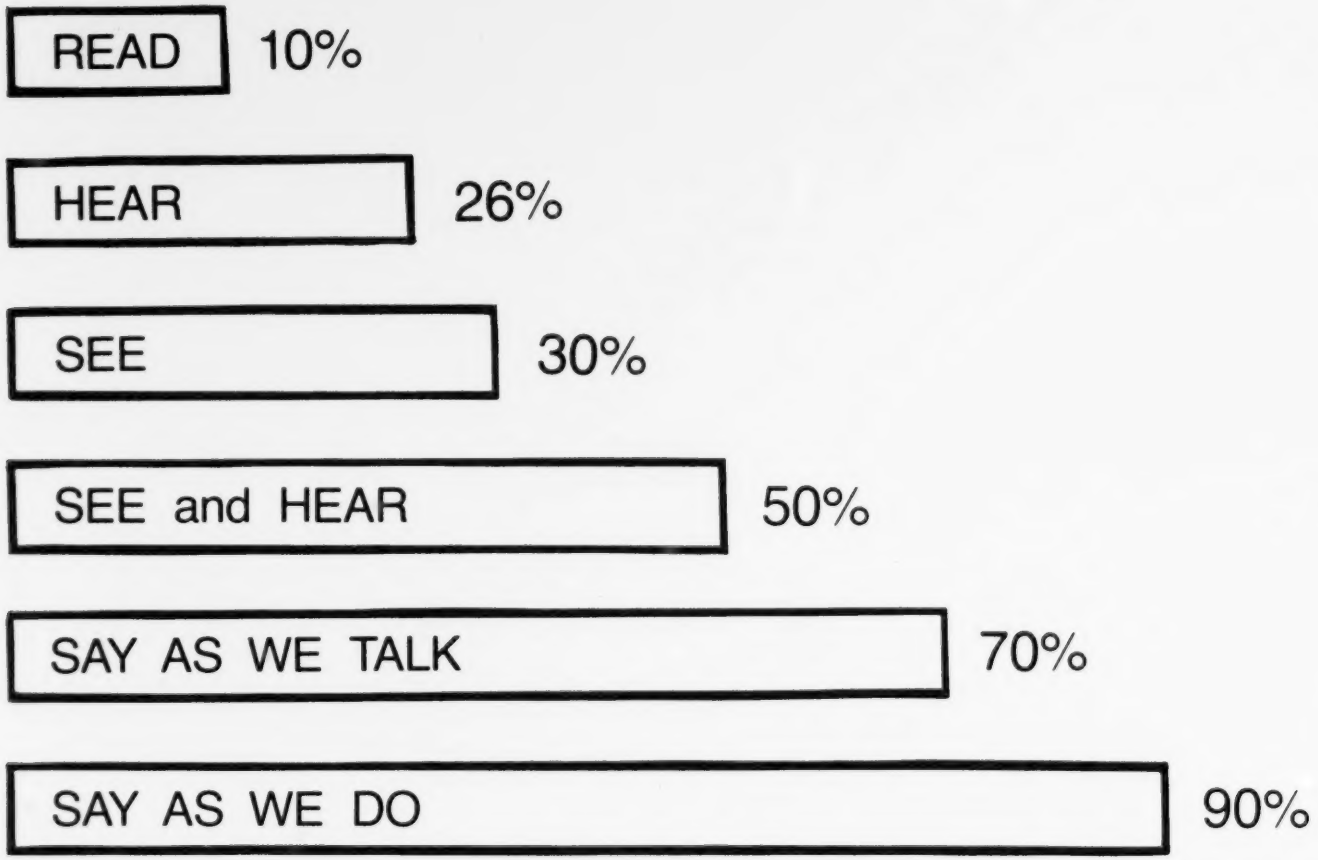
TARGET IS TOO NEAR

TARGET IS TOO FAR

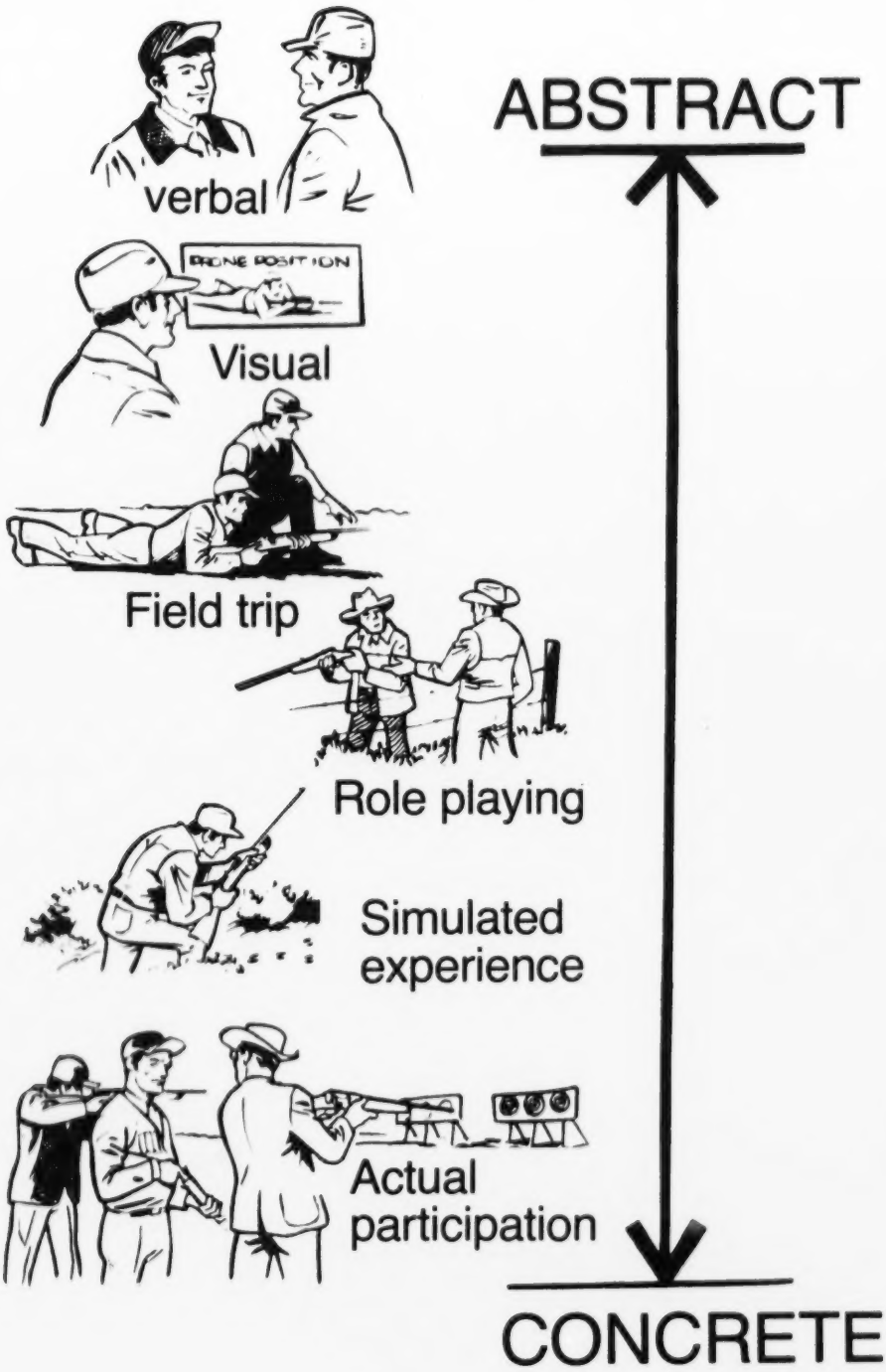
8 MOTIVATION

241

242



9 RETENTION OF INFORMATION



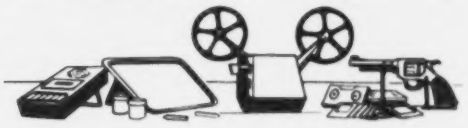
10 LEVELS OF EXPERIENCE

⓫ PLANNING LEVELS

12 DAILY LESSON PLAN

REFERENCES

TEACHING AIDS



OBJECTIVES ----------

content	teaching methods

INTRODUCTION

A.

1.

2.

LESSON DEVELOPMENT

B.

C.

D.

SUMMARY

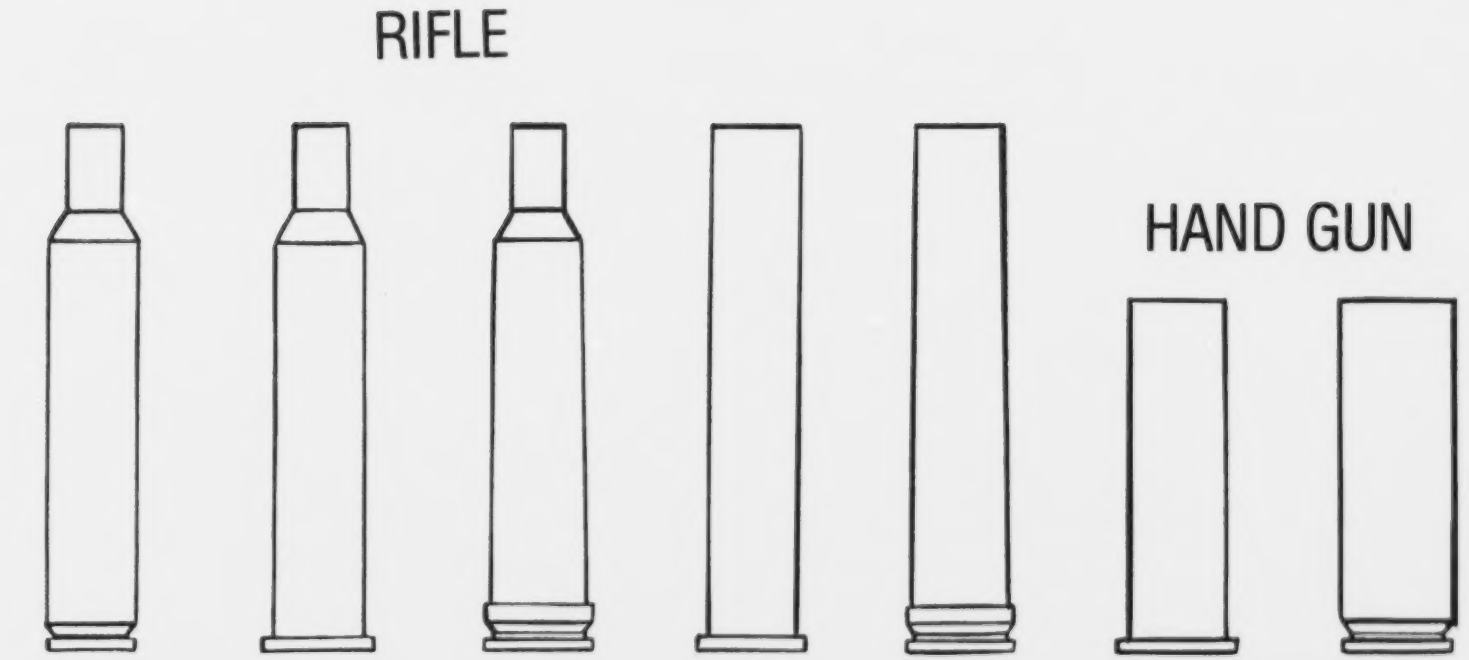
E.

ASSIGNMENT

F.

TEACHER COMMENTS:

⓭ CASE TYPES



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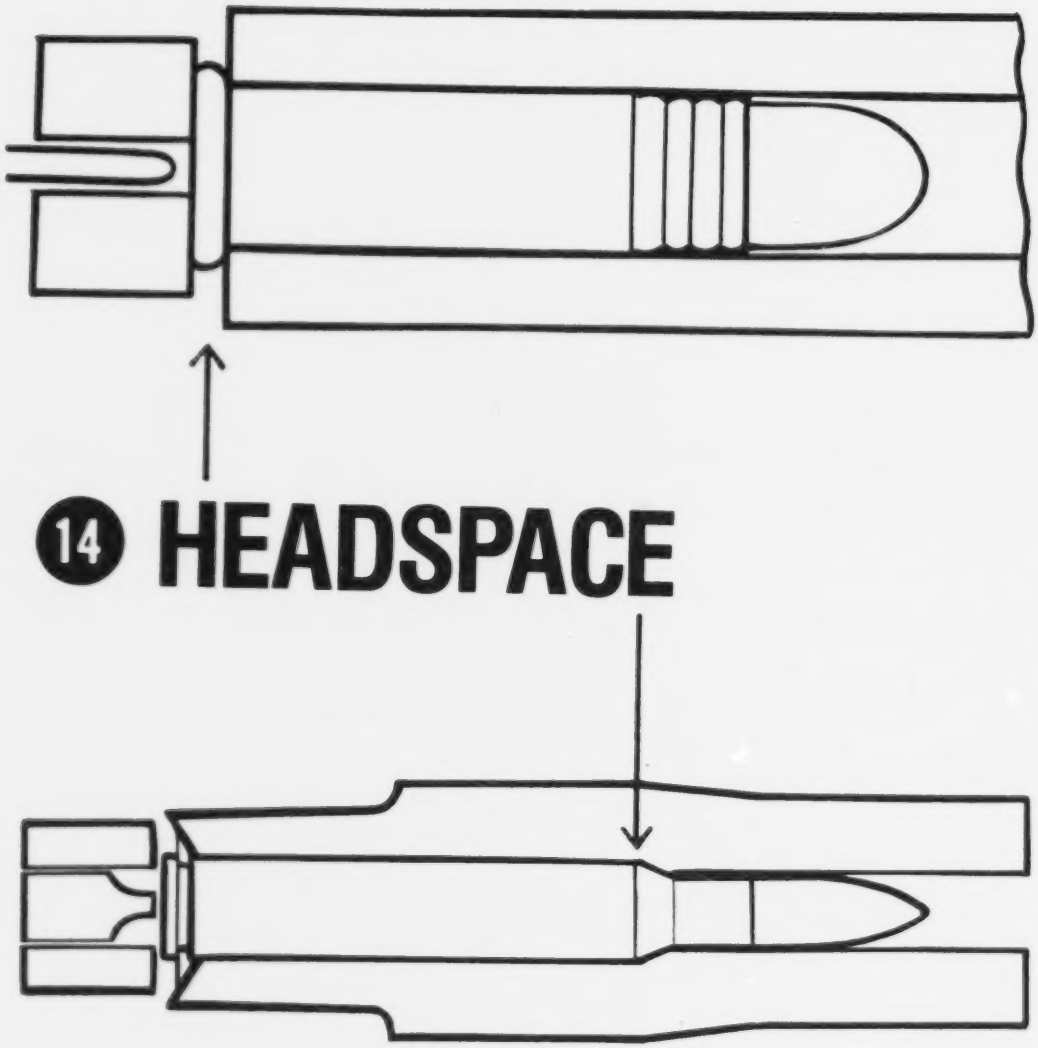
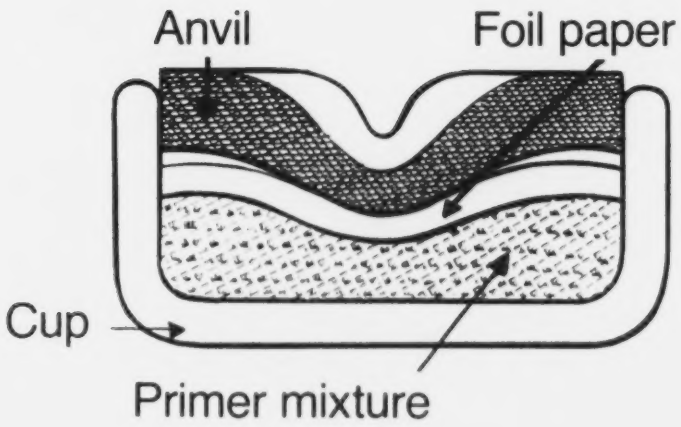
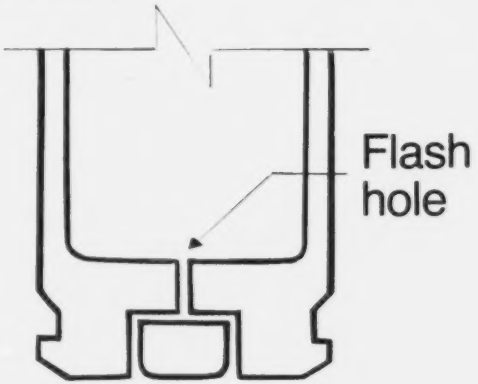
249


14 HEADSPACE

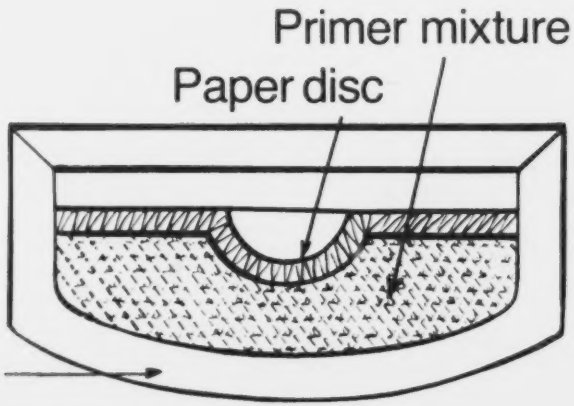
⑮ PRIMERS

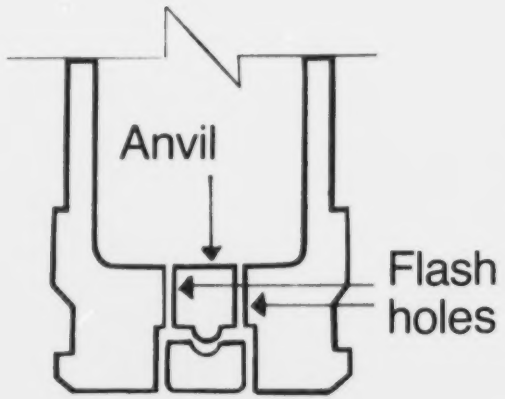
AMERICAN BOXER





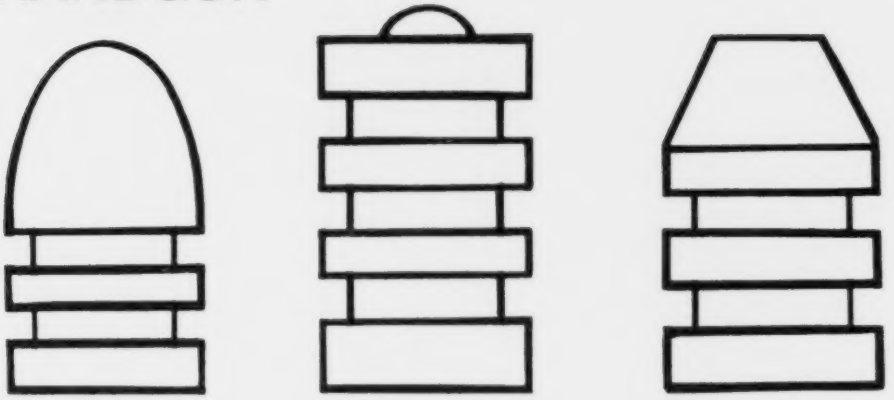
BERDAN





16 BULLET SHAPES

HANDGUN

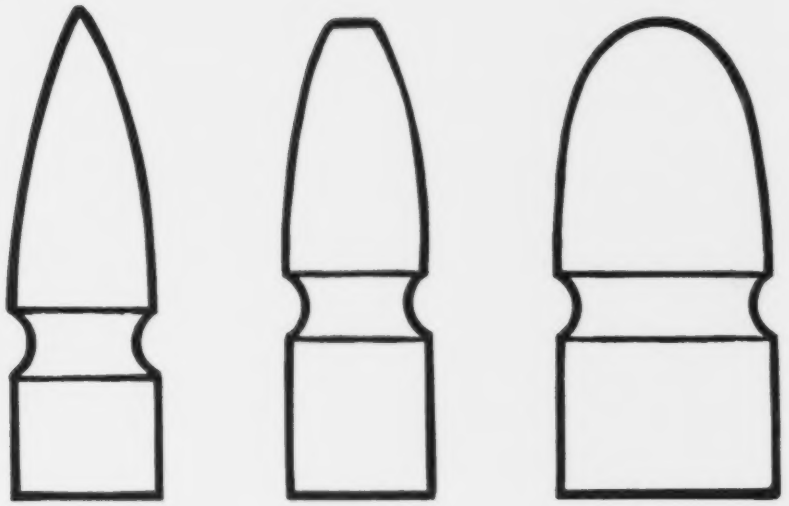


ROUND NOSE

WAD CUTTER

SEMI-WAD CUTTER

RIFLE

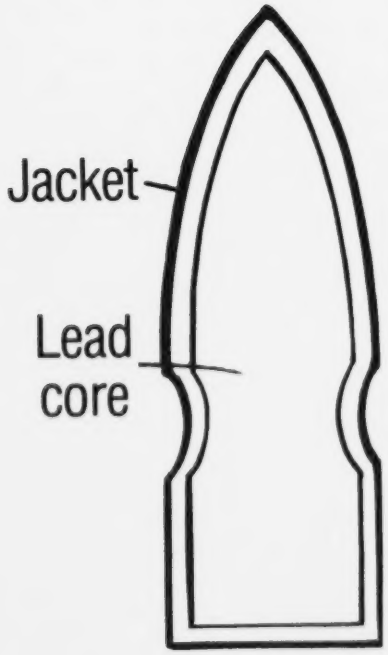


SPITZER POINT

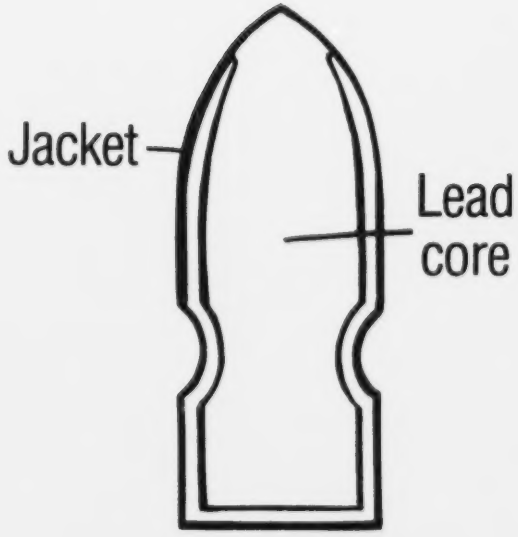
HOLLOW POINT

ROUND NOSE

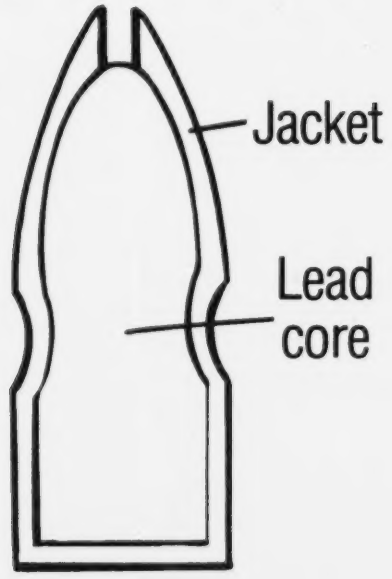
17 JACKETED BULLETS



FULL JACKET



SEMI-JACKETED

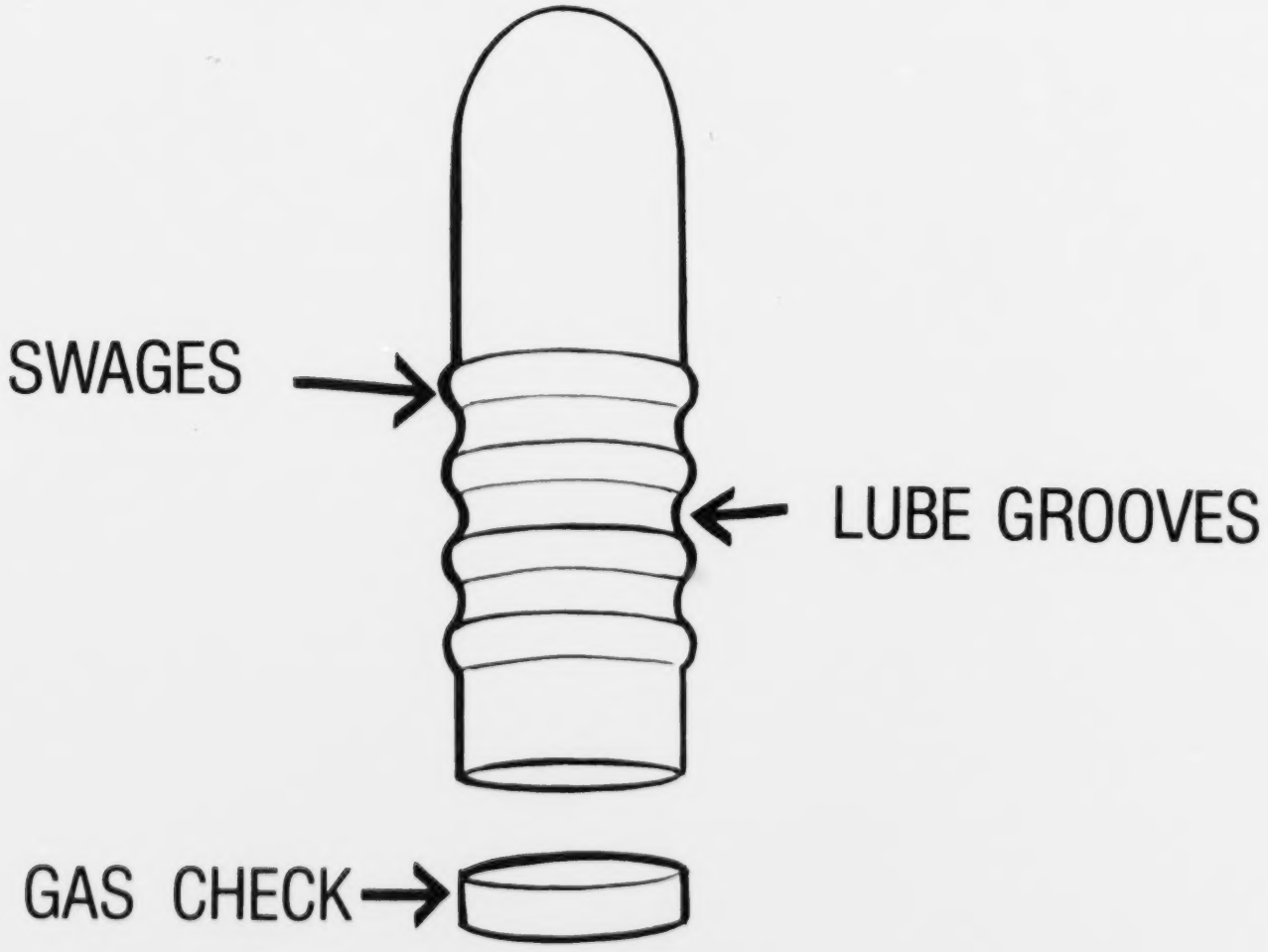


HOLLOW POINT

254

255

18 CAST BULLETS



256

257

⑲ LEAD SHOT SIZES

- 9
- 8½
- 8
- 7½
- 7
- 6
- 5
- 4
- 2
- BB

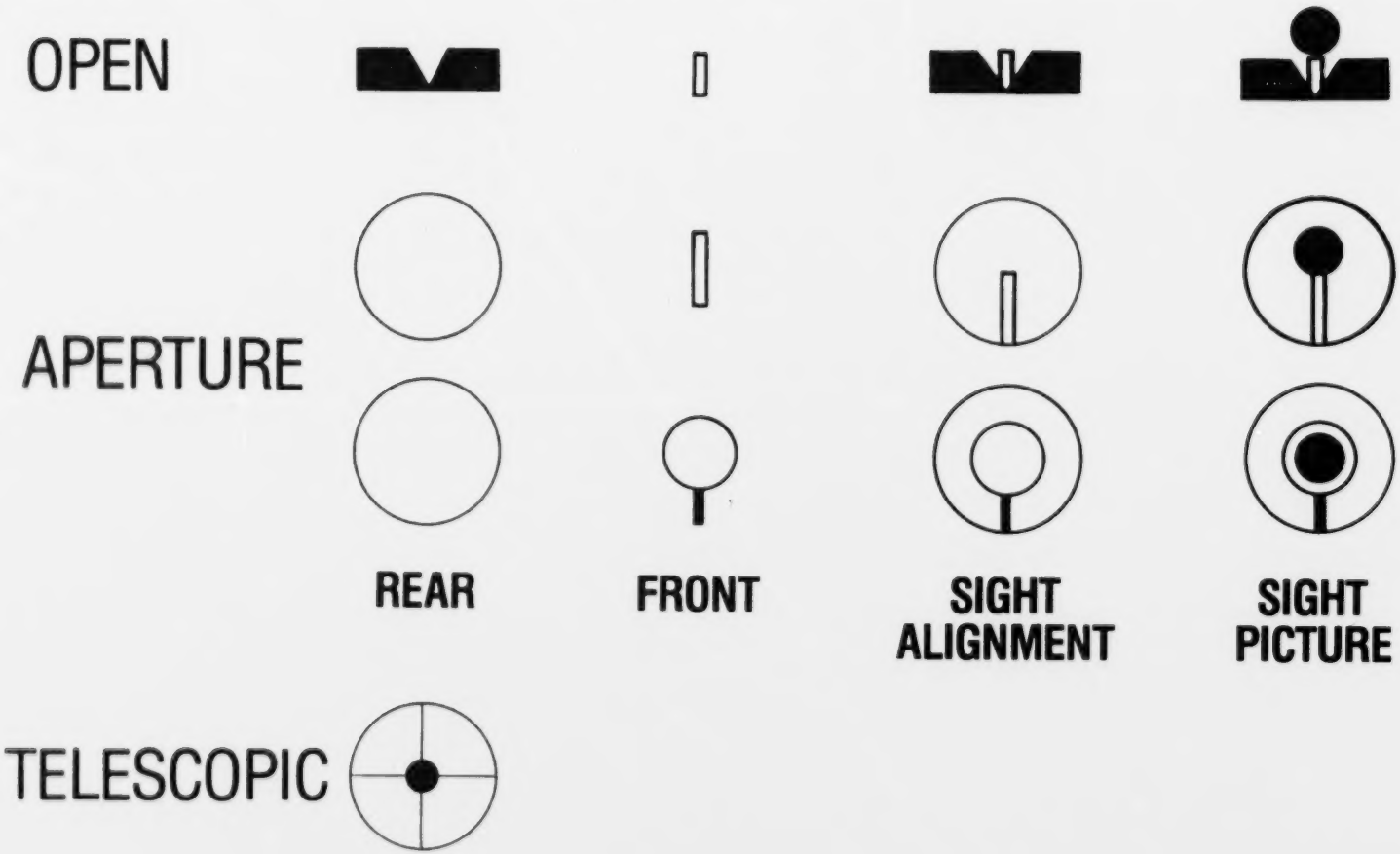
NOT PRINTED ACTUAL SIZE-
Shown in scale to length of bar

= ONE INCH

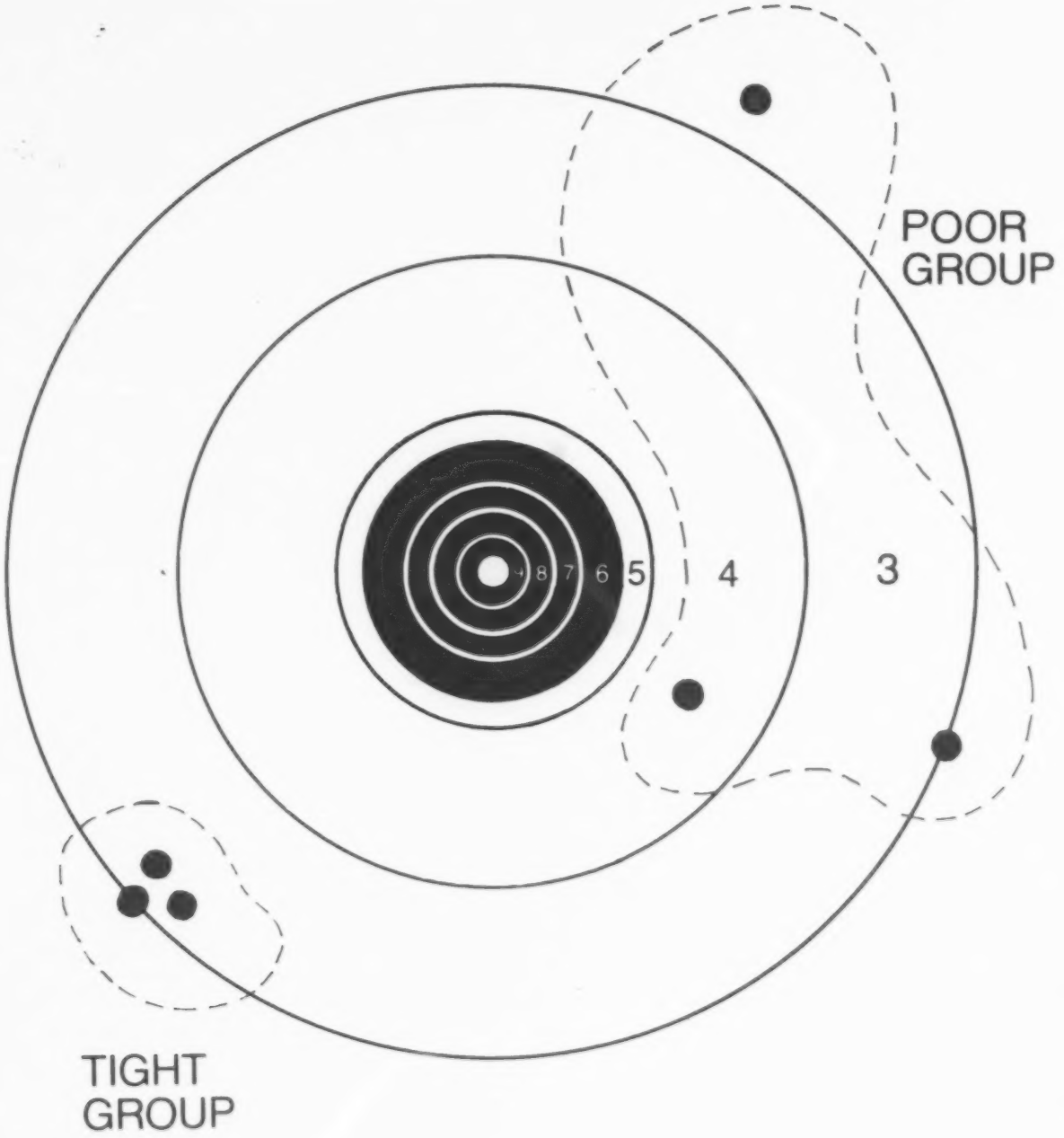
BUCKSHOT

- 4
- 3
- 1
- 0
- 00

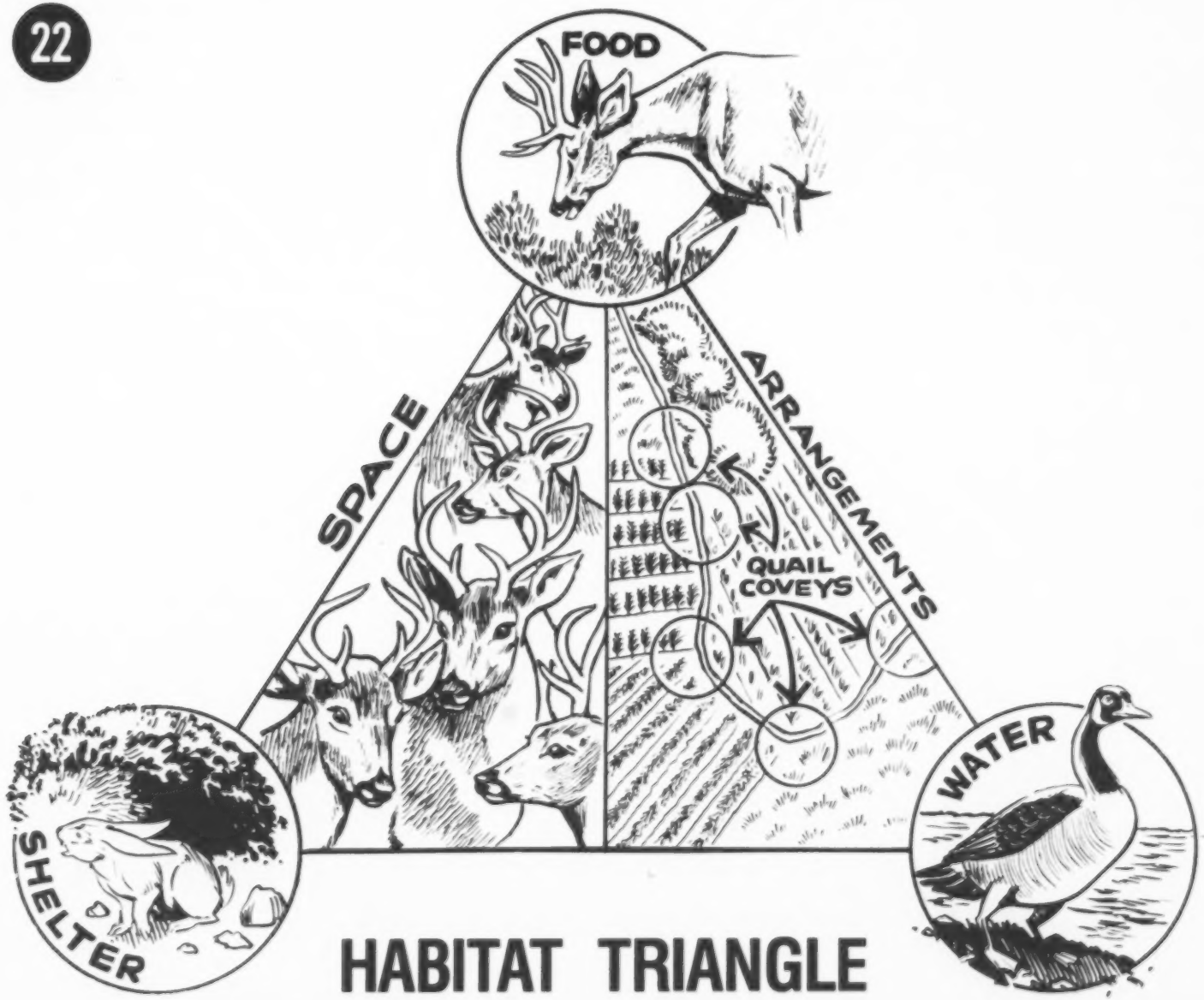
20 SIGHTS


OPEN
APERTURE
TELESCOPIC
REAR
FRONT
SIGHT ALIGNMENT
SIGHT PICTURE

21 SHOT GROUPS



22



HABITAT TRIANGLE

23 ECOLOGICAL SUCCESSION

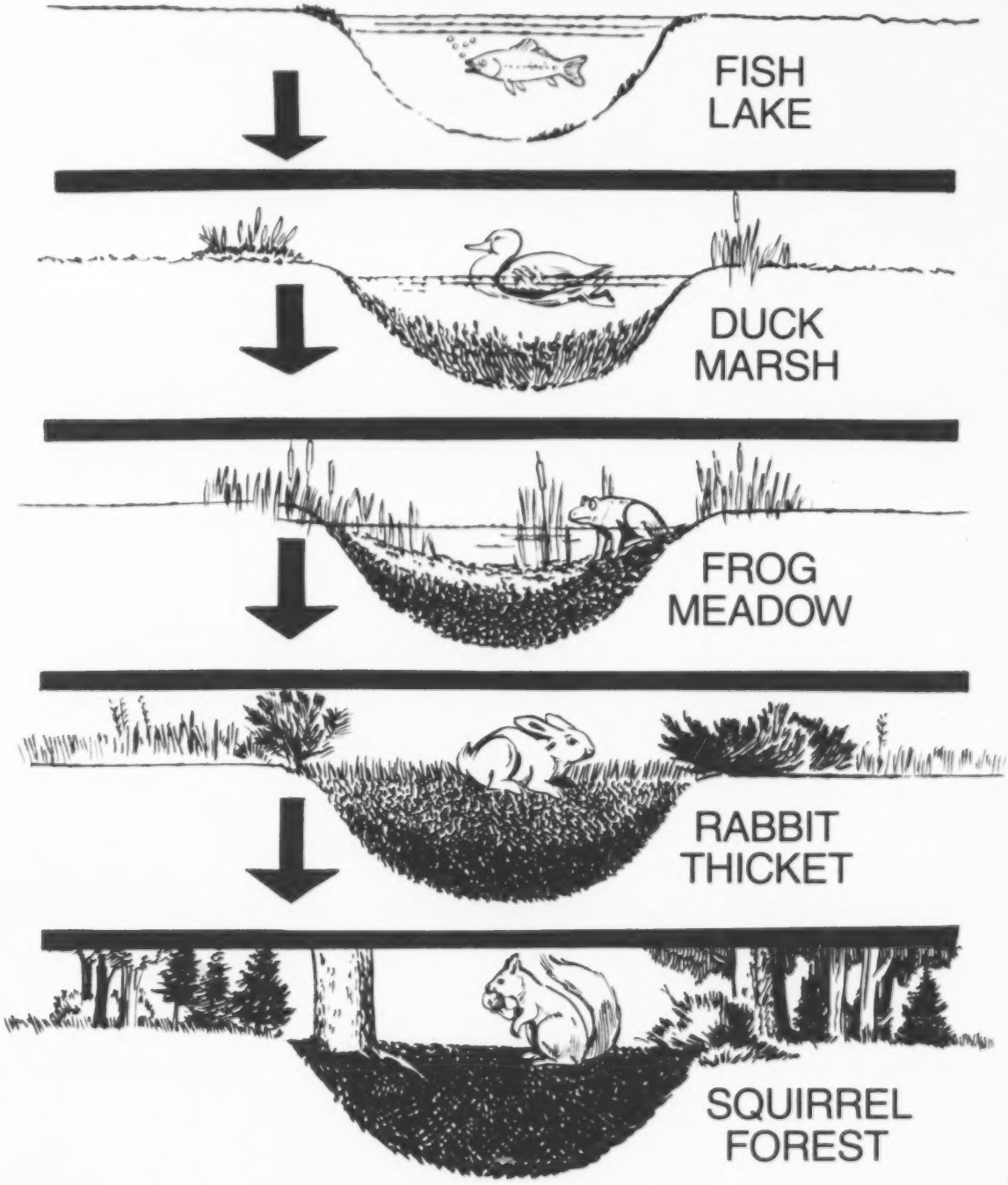
BARE SOIL

GRASS & FLOWERS

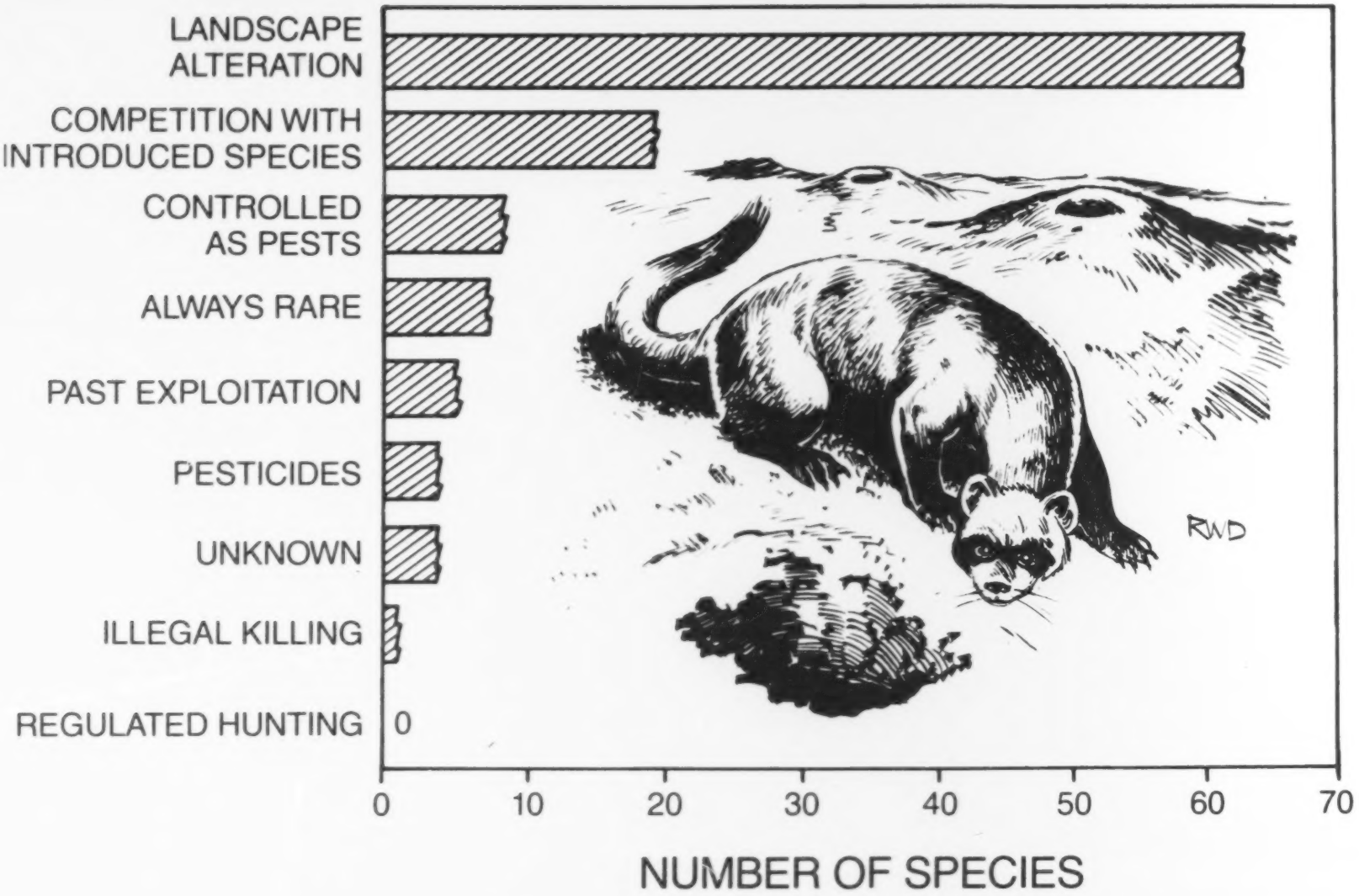
SHRUBS & SHORT-LIVING TREES

CLIMAX STAGE WITH TALL MATURE TREES & ONLY A FEW SHRUBS & GRASSES

24 HABITAT and WILDLIFE CHANGES

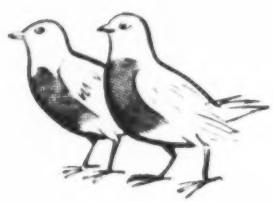
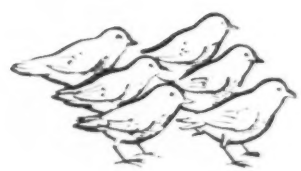
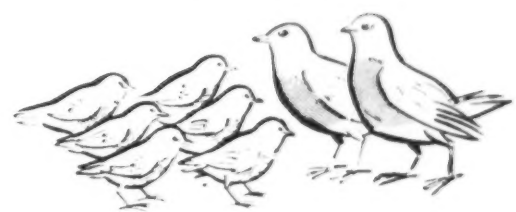


25 THREATENED and ENDANGERED SPECIES



26 POPULATION BATHTUB

27 POPULATION GROWTH

	1 PAIR	6 YOUNG	8 TOTAL
FIRST YEAR			
SECOND YEAR	4	24	32
THIRD YEAR	16	96	128
FOURTH YEAR	64	384	512
FIFTH YEAR	256	1,536	2,048

259

28 BIOLOGICAL SURPLUS

DISEASE
SEVERE WEATHER
HUNTING
STARVATION
PREDATORS
ACCIDENTS

} EXCESS

29 EUROPEAN HUNTER TRAINING

CUSTOMS, TRADITIONS AND ETHICS

HUNTER SAFETY

HUNTING SKILLS

GAME MANAGEMENT

WILDLIFE IDENTIFICATION

LIFE HISTORIES OF GAME AND PREDATORS

LAWS

GAME CARE

OUTDOOR LORE

SIX MONTHS OF PRACTICE

APPENDIX G

SOME ASPECTS OF EUROPEAN HUNTING AND GAME MANAGEMENT

*Julius G. Nagy, retired

INTRODUCTION

There are two general statements Americans usually make when discusssing hunting in Europe. First, people refer to "European game management and hunting" as if it were the same in all countries. Second, Americans say that "only the rich and the nobility are hunting in Europe." Both of these statements are overgeneralizations.

European countries differ considerably as far as philosophies of game management and hunting are concerned. However, some general statements comparing European and American systems can be made. We could safely say that European hunters are more involved with game management, there are usually fewer hunters in European countries and European hunters receive much more training than their counterparts in the U. S. Even these statements are too general. Actual practices vary considerably from country to country.

Hunting privileges of the nobility ceased to exist in Europe over a century ago. Today, every citizen can hunt if he is inclined to do so. Big game hunting is more expensive in many European countries, but not because of the peculiar management system. There is simply less land available for game in highly populated European countries. For example, West Germany is about the size of Oregon with approximately 60 million inhabitants. One cannot help wondering how game populations are supported under these conditions. Yet, West Germany is harvesting considerable numbers of big and small game.

In this paper most of the discussion regarding hunting and game management will be restricted to central European countries such as Germany, Austria and Switzerland. Czechoslovakia, Hungary, Poland and Yugoslavia could also be included in some respects. The latter countries traditionally had the same philosophy and practices regarding hunting and game management systems. Only after World War II was the arbitrary division of Eastern and Western Europe invented. Although basic laws regarding hunting and game management changed in these countries, hunting customs and ethics are still based on centuries of development.

EUROPEAN MANAGEMENT SYSTEMS

Table 1 compares hunting and game management in the U. S. and some central European countries. In the U.S., game is managed by professionals from state and federal governments. The state owns wildlife "in trust" for the people. American hunters have no responsibility for game management other than input to the decision-making process.

Central European hunters are game managers as well as harvesters of game. States have the power to regulate hunting and game management by laws and regulations, but even law enforcement responsibilities lie mainly in the hands of hunters. Hunters are custodians of game and have year-round responsibilities and privileges.

Ownership of game in central Europe is usually attached to the landowner. For example, lands are divided into hunting or game management areas which are called "reviers" in West Germany. Boundaries of these reviers may be geographical and/or could cover a large estate, state land or combine the lands of several farmers into one unit. Landowners hold the hunting rights on reviers and these rights can be leased to individuals or hunter associations. Rent is usually long-term (5 to 12 years) and can be very expensive. Since landowners make considerable profit from renting their reviers or from hunting themselves with their guests, there is considerable interest in providing excellent habitat for game.

The value of a revier depends on several factors. In the case of big game (mainly red deer, roe deer and wild boar), the number of animals as well as animal condition and the capability to produce trophy animals are considered. Quantity of game found on a hunting area is important for small game such as pheasants, partridge and hare.

Although hunting rights are connected to land ownership, the holder of hunting rights is responsible to the state. For example, hunters must take an annual census of big game and submit a game harvest plan to the state. This shooting plan considers the number of male, female and young animals which will be harvested to maintain a healthy herd. Once approved, the harvest plan becomes mandatory. No shooting plan is required for small game, but holders of hunting rights must maintain a reasonably accurate census and provide sufficient brood stock each year.

Since hunters are also game managers in Europe, hunting is a highly specialized sport. It is certainly beyond the interest of average citizens although it is not necessarily beyond the financial means of most citizens.

HUNTING SEASONS

Hunting seasons in Europe are relatively long (Table 1). This enables hunters to take game with very little pressures to "bag" their game. In the case of big game, hunters have time to shoot weak animals and those with poorly developed antlers to improve herd quality. There is really no specific bag limit for individual hunters and hunting is done in a leisurely, but efficient, manner. European hunters do remove surplus animals from game populations and hunters, after properly producing the game, will do the harvest.

In contrast, American hunters are normally restricted to taking a limited "bag" of game in relatively short periods of time. This creates problems of too many hunters in the field at one time and often results in inefficient harvests.

CONSUMPTION OF GAME

Legally taken game becomes property of the hunter in the U. S. In many European countries, harvested game still belongs to the people who hold the hunting rights (landowner or lessee of hunting areas). Hunters are paying for the privilege of hunting, not for the game meat. The hunter is entitled only to the trophy and the liver, kidney and lungs. Most of the meat is sold on the open market to stores and/or restaurants. Game meat is a delicacy in Europe and is very expensive (Table 2).

HUNTER TRAINING

Although requirements to obtain a "hunter license" vary from country to country, practically all European countries require some proficiency in handling firearms, knowledge of game management and hunting skills. The most stringent laws are found in the central European countries such as Austria, Czechoslovakia, Hungary and Germany. Requirements in these countries are similar with minor variations.

Hunting associations teach courses and administer examinations for the would-be hunters with some supervision from the state. Courses consist of approximately 15-20 lectures with ample amounts of take-home reading material. Subject matter includes the following:

- Hunting laws and regulations
- Hunting customs, traditions and ethics
- Game management
- Hunting methods
- Guns and equipment
- Hunter safety
- Hunting dogs
- Diseases of wildlife
- Life histories of game and their predators

Would-be hunters usually serve an "internship" to learn practical game management and hunting skills. This training can last for six months or more.

After successful completion of written and oral examinations, hunters receive a "hunter license" - similar in principle to a driver's license - which certifies them as hunters but does not entitle them to hunt. In practice, most people in hunter training already know of hunting clubs or associations which are willing to take them or they are landowners or lessees of hunting rights.

HUNTING METHODS

Game is hunted in Europe by stalking, sitting and driving using beaters and dogs. Blinds for still-hunters are usually high seats which range from simple structures to enclosed pulpits. These elevated platforms are built at strategic points overlooking clearings, feeding stations or well-used crossings. Besides offering safety, cleaner kills and ample time to identify game, high stands are used to census game, take pictures or just observe wildlife.

Drive hunts are used for big game and small game. These hunts can be simple affairs with only a few hunters and beaters participating or highly organized and elaborate drives. When big game is being driven, beaters move very slowly so that the hunters will have good shots.

HUNTING CUSTOMS, TRADITIONS AND ETHICS

Customs, traditions and ethical behavior are an important part of European hunting activities. Many traditions probably originated in prehistoric times and are found in primitive hunting societies. For example, a small branch of spruce, oak or other specified trees is placed crosswise in the mouth of cloven-hoofed animals. This represents the "last bite" and is a token of respect for fallen game. Another custom is to dip a small branch in the blood of cloven-hoofed game that is harvested. This branch is placed in the hat band of the successful hunter.

After drive hunts there is a formal display where game is spread in rows according to species. Hunters pay their respects to the fallen game by removing their hats while a bugler makes specific sounds.

Ethics are taught during hunter training and play an important role in all hunting situations. European hunters do not tolerate unethical behavior in the field. Hunters who behave poorly are ostracized by their peers and usually quit hunting altogether.

APPENDIX G

Table 1. Basic philosophical differences between some central European countries and the U. S. with regard to game management and hunting.

	USA	Central Europe
Game ownership	States	Landowner (owner or lessee of hunting rights)
Management	States	Hunter
Laws and regulations	States	Hunter with state
Law enforcement	States	Mainly hunters with state help
Hunting seasons	2 days—4 months (relatively short)	6 months or more for most game species
Consumption of game	Hunter and families	Public and hunter
Public attitude toward hunting	*Right* of every citizen	*Privilege* of every citizen

Table 2. Prices paid for game meat to producers (revier owners or lessees) in W. Germany, 1974.

	Species	$
Per pound		
	Red deer	2.30[1]
	Roe deer	2.70
Per animal		
	Hare	6.00
	Pheasant	3.00
	Total income for producers	$46 million

[1]Wholesale choice beef prices during 1974 were around $2.00 per pound.

CONCLUSIONS

The foregoing presentation of some aspects of European hunting and game management gives a very limited overview of the subject. For a more thorough treatment, readers are referred to the literature listed at the end of this article.

Two important aspects of European hunting and game management are thorough hunter education and the built-in reward systems for landowners who provide habitat for game. The public also benefits through game meats available in restaurants and markets, and an abundance of wildlife for all to see. A large segment of the public is benefiting from the efforts of relatively few hunters.

Training, examinations and internships discourage all but the most dedicated individuals from becoming hunters. Certified hunters take responsibility for game management and those not willing to adhere to traditions and behave ethically are removed from the hunters' ranks.

There are at least two reasons why U. S. wildlife managers and hunters should learn more about European hunting systems. First, the U. S. is facing an increase in human population and industrialization with corresponding decreases in wildlife habitat. European countries experienced these conditions and their hunting systems and wildlife survive today.

Second, American hunters are facing increasing anti-hunting and anti-hunter sentiment.

European hunters are respected members of society for reasons discussed in this paper. Americans can benefit by following the example set by their neighbors across the ocean.

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